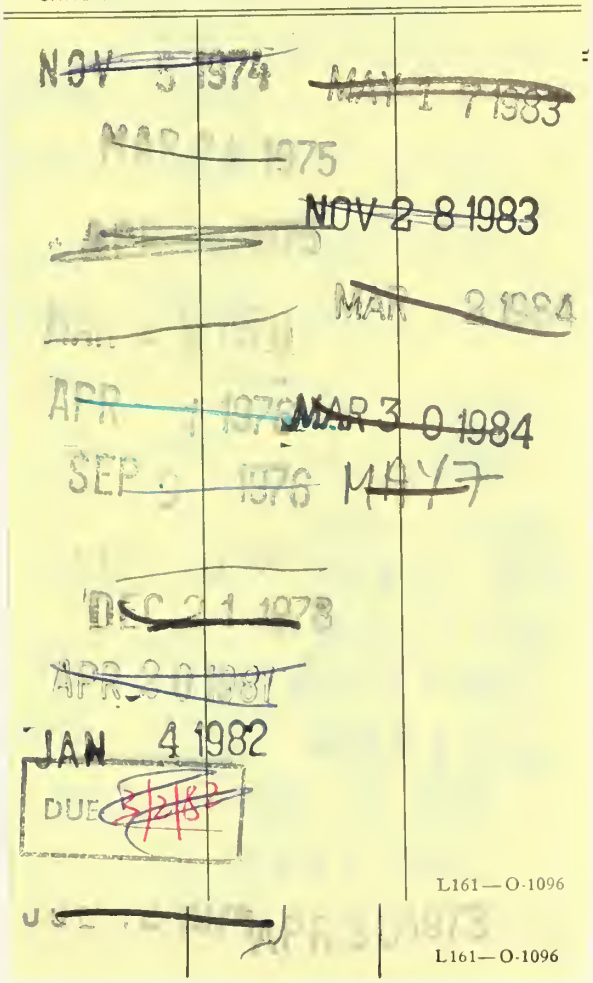

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FARMER USE OF FUTURES MARKETS

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This publication was designed for Illinois conditions, primarily east-central Illinois. The farm prices used are those of east-central Illinois. As the reader proceeds, it will become apparent that the key to the use of futures markets is understanding the behavior of the relationship of cash and futures prices.

To the user the important relationship of cash and futures prices is that at his location. Cash prices are not uniform throughout Illinois and the nation. It is therefore necessary that the user be familiar with cash to futures relationships at his location.

While prices are different throughout the country, they bear fairly consistent relationships with each other. To adapt the price relationships shown here to local conditions, a comparison of local prices and the east-central Illinois prices included here should be made by months for a period of several years.

The careful user of futures markets will develop his own basis charts to guide his trading.

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FARMER USE OF GRAIN FUTURES MARKETS

T. A. Hieronymus[1/]

Introduction

This is a "how to" publication. Farmers have indicated interest in grain futures markets, both a general interest in how futures influence the price and marketing of grain and a specific interest in how they can use futures in their farming operations.

Futures markets are an advanced and sophisticated system of trading in contracts for deferred delivery. A fairly high level of knowledge about them is necessary if they are to be used effectively. At the same time they are basically simple exchange markets that evolved out of existing commercial needs for them. The acquisition of enough knowledge to use futures markets is neither a long nor a difficult process. It is a satisfying process because it can sometimes be profitable and because it is good fun to be knowledgeable about a thing that is so confusing to so many people.

We will proceed here through six steps: (1) description of futures trading, (2) how one actually trades, (3) the economics of futures trading, (4) cash and futures price interrelationships, (5) the uses farmers can make of futures, and (6) some common pitfalls in futures trading.

Description of Futures Markets

Futures trading is authorized for many commodities and on several exchanges. The United States exchanges and the commodities authorized for trading are as follows:

Exchanges	Commodities
Chicago Board of Trade	Wheat, corn, oats, rye, soybeans, lard, cotton, cottonseed oil, soybean oil, grain sorghums, soybean meal
Chicago Mercantile Exchange	Butter, eggs, potatoes, frozen broilers, frozen turkeys
Chicago Open Board of Trade	Wheat, corn, oats, rye, soybeans
Duluth Board of Trade	Wheat
Kansas City Board of Trade	Wheat, corn, bran, shorts, middlings, grain sorghums
Memphis Board of Trade	Cottonseed meal, soybean meal, soybeans

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Exchanges	Commodities
Milwaukee Grain Exchange	Wheat, corn, oats, rye
Minneapolis Grain Exchange	Wheat, oats, rye, soybeans, flaxseed
New Orleans Cotton Exchange	Cotton
New York Cotton Exchange	Cotton wool, wool tops
New York Mercantile Exchange	Potatoes, eggs
New York Produce Exchange	Cottonseed oil, soybean oil
Portland Grain Exchange	
Seattle Grain Exchange	Wheat
San Francisco Grain Exchange	

Not all of the commodities are actively traded on all of the exchanges. With regard to the grains, the Chicago Board of Trade is by far the largest market. Kansas City and Minneapolis, as well as Chicago, are important wheat futures markets. Nearly all of the futures trading in the other important Illinois-produced grains (corn, soybeans, wheats) is conducted at Chicago.

Futures contract. A futures contract is an agreement between two members of an exchange to buy and sell at a specified time in the future an agreed amount of a commodity at an agreed price. This contract for deferred exchange may or may not be finally consummated by an exchange of title. It is nevertheless a firm and binding agreement.

The contracts are highly standardized so that most of the terms are understood and trading can proceed with a minimum of negotiation and great rapidity. The standard unit of trading is 5,000 bushels of the major grains. These contracts may be subdivided into smaller units for the benefit of people who wish to trade in units of less than 5,000 bushels. These "job lots" are in multiples of 1,000 bushels for corn, soybeans, and wheat, and multiples of 2,000 bushels of oats.

The unit of trading is 1/8 of a cent. This amounts to $6.25 per 5,000-bushel contract.

There are various delivery months authorized for trading. These have been adopted over time out of existing trade practices. For the four principal grains they are:

Corn	Oats	Wheat	Soybeans
December	July	July	September
March	September	September	November
May	December	December	January
July	March	March	March
September	May	May	May
			July
			August

It is desirable that the months of trading be restricted to less than 12 so that trading does not become spread over so many months that market liquidity is reduced. The selection of the various months is logical. For example, July is the main month of winter wheat harvest, September is the main month of spring wheat harvest, December is the last month of navigation on the Great Lakes (an important method of wheat movement), March is the first month in which navigation is open on the lakes, and May is the last month before new crop harvest.

For each trade the quantity, the month of delivery, and the price must be agreed upon by negotiation between the two principals. The rest of the terms of the contract are uniform for all contracts and are understood. Delivery shall be made at any time in the delivery month, from the first day to the last, that the seller elects.

Delivery is made in store in any one of several public warehouses designated as "regular" by the Chicago Board of Trade and located in the rail switching district of Chicago. An exception to this rule is that delivery may be made, again at the option of the seller, in railroad boxcars during the last three business days of the delivery month.

All qualities traded are for No. 2 grade. There are premiums and discounts if the seller elects to deliver a higher or lower grade.

The terms of payment are cash on delivery of warehouse receipts. No credit is extended on futures trading.

Pit trading. At first glance trading on the Chicago Board of Trade looks like pandemonium--completely disorganized confusion at an extremely rapid rate. Trading is done in pits. These are hexagonal structures with steps that lead down into the center. This arrangement results in maximum visibility for all of the traders. The place where each trader stands indicates the delivery month in which he is primarily interested in trading.

All bids and offers are cried out in a sufficiently loud voice for all to hear. The result is that there is sometimes so much noise that few can hear and trading is actually done by a system of hand signals. Each trader carries a small card on which he records each trade that he makes. At the end of the day all of the trades are reported to a central clearing house, and all reported purchases and sales must match up.

At an elevated position overlooking each of the trading pits, there is stationed a market reporter. He observes each change in price, writes each new price down, and sends it to a central point near the trading floor, where it is put on the ticker system for transmission to grain tickers throughout the country. The whole reporting process takes only a few seconds.

There are several different kinds of people in the trading pits. Among them are scalpers, pit traders, position traders, and spreaders. These people trade for their own accounts, attempting to buy for less than they subsequently sell for or to sell for more than they subsequently buy for. They are speculators, attempting to earn money out of changes in prices. They perform several useful

functions: providing liquidity, assuring competition, assuring rational price interrelationships, interpreting current market news quickly, etc. On balance their influence is to make the market a competitive and very sensitive pricing device.

Also in the pit are brokers who act on instructions of commission companies, who in turn act on instructions of customers. We noted earlier that only members trade. Brokers are the means through which nonmembers, that is, the general public, become principals in futures market trades.

The exchange. The exchange is an association of people whose businesses are related to the marketing of commodities. The Chicago Board of Trade, which is our focal point of interest, consists of 1,402 members. The membership is limited to this number and is changed only by special action of the exchange. Memberships are bought and sold by negotiation between individuals. The price varies and in recent years has ranged between $3,500 and $8,900. Each prospective member must be approved by the membership committee of the exchange.

The Chicago Board of Trade is governed by an elected board of directors consisting of a chairman, vice chairman, second vice chairman, and 15 directors. The principal executive officer is the president, who is appointed by the board and is paid a salary.

The exchange operates primarily through committees. It includes such committees as arbitration, business conduct, clearing house, floor conduct, rules, public information and education, market reports, etc. These committees formulate policy and guide and direct the activities of the exchange.

The membership is composed of people whose activities include every phase of the marketing of grain. They include operators of terminal elevators, interior or country grain merchants, processors of the various kinds of grains and soybeans, exporters, commission futures merchants, brokers, cash-grain merchants, and speculators.

The membership is representative of the grain trade, and the exchange is democratically governed by the membership. The result is a system of checks and balances on the conditions of futures trading that assures a reasonably equal competitive balance among the various conflicting interests.

The exchange has certain general functions. Chief among them are to (1) provide the facilities for trading, (2) write the rules, (3) supervise the trading to enforce the rules, (4) distribute market information, including price quotations, and (5) act as a trade association on behalf of its members in relation to government and the public.

It should be noted that actual trading is absent from this list. The exchange itself does not trade in futures contracts. Only members of the exchange trade.

Governmental regulation. Futures trading in grains developed during the period from 1848 to 1870. It has had a long history of distrust and complaints, and consequently there have been many appeals to government for regulation. A thorough investigation by the Federal Trade Commission in the early 1920s resulted

in the Grain Futures Act in 1922 and the establishment of the Grain Futures Administration as a division of the USDA. There were extensive studies of futures trading in the 1920s and the early 1930s. They resulted in major amendment of the Grain Futures Act in 1936, including renaming the act the Commodity Exchange Act and the administrative body the Commodity Exchange Authority.

The major functions of the Commodity Exchange Authority are (1) licensing of futures exchange, (2) licensing of brokers and commission futures merchants, (3) audits of the records of commission futures merchants, (4) surveillance of trading, (5) investigation of complaints, (6) regulation of the total positions that may be held by one individual and the volume of trading permitted in one day, and (7) making and publicizing of market surveys and analyses.

Through these activities the CEA works to prevent the unlawful practices of (1) price manipulation and market corners; (2) fraud, cheating, and manipulation, such as false records of trade, ficticious trades, deceiption in the execution of orders, and failure to execute all trades in the pits; and (3) improper brokerage practices and misuse of customers' funds for the broker's own business.

Thus, there are two major supervisory bodies, the exchange and the Commodity Exchange Authority. The result is that futures markets are open, competitive, public markets, freer of collusion, monopolistic and manipulative practice, and price fixing than any other system of trading.

How One Actually Trades

To trade in futures markets, nonmembers must become customers of commission futures merchants. There are several of these firms located at Chicago, and most of them have branch offices in outside cities. Branch offices of the different firms are located throughout Illinois so that there is one not too far from any point in the state.

The customer signs an agreement with the commission futures merchant authorizing him to execute trades and makes a deposit of funds to guarantee performance on the contracts. The agreement is usually fairly long and in fine print. The new customer should read the agreement carefully so that he fully understands the rules under which he must operate.

There is no reason for distrust of commission futures markets. They are licensed by the USDA and are closely supervised both by government and by the exchange. The customers' agreements are essentially the same for all firms, and the changes are uniform and are set by the exchange.

Commission firms will undertake to execute any kind of order that the customer places provided they can clearly understand what the customer wants.

There are several different kinds of orders that customers place. The simplest is the market order; it instructs the broker to buy or sell, as the case may be, immediately at the most advantageous price. The broker tries to buy or sell at the most recently traded price. If no one accepts, he bids the price up or offers at lower prices until someone does accept. Thus, the trade may be executed at a price a little bit away from the last traded price. Second is a

limit order. In this case the customer tells the broker to buy if he can get as low a price as, say, $1.41 3/8 or sell if he can get as much as $1.41 3/8. Limit orders may be placed at the last traded price, near it, or several cents away. Third is the stop loss order. Here a customer who has previously bought says to sell out at the market if the price goes down to such and such a figure. The opposite kind of stop loss is used when the customer has previously sold. The purpose of the stop loss order is to limit a threatened loss or to insure an existing profit. Fourth is a spread order, which is used when a customer wishes to buy one delivery month and simultaneously sell another. He instructs the company to buy, say, March and sell May at a premium of (no more than) three cents. There are various reasons for placing such an order. These will be discussed below. More complicated orders can be placed, but these are enough to make the point that the commission merchant will take any order that he can understand and readily execute.

Market orders are processed and executed with great speed. In one trial run, without advance warning that it was being timed, a market order was placed at a branch office 150 miles from Chicago. Forty-two seconds later the customer was handed a slip of paper indicating the price at which the trade had been made. To make the actual trade took only 12 seconds. This is an unusually fast time, but a minute is considered a long time for execution.

Long and short. A position in a futures market can be either long or short. To be long is to have a contract to purchase, accept delivery, and pay for a commodity later. It is to have an inventory purchased for deferred delivery. If an individual purchases 5,000 bushels of July corn at $1.25, he will, unless he takes some offsetting action in the meantime, receive and pay for a warehouse receipt indicating ownership of 5,000 bushels of corn in store in a public warehouse in the City of Chicago sometime during the month of July. If, by the time delivery is made, the price has gone up, say, to $1.30, he can sell the corn for more than he paid for it and thus make a profit. If the price is lower, he must take less if he sells and thus sustain a loss. The long makes money if the price goes up.

To be short is to have a contract to sell, deliver, and accept payment for a commodity later. It is to owe inventory for deferred delivery. If an individual sells 5,000 bushels of July corn at $1.25, he must, unless he takes some offsetting action in the meantime, deliver the actual corn in Chicago sometime during the month of July. If, by July, the price has gone up, say, to $1.30, he would have been able to sell his corn for more than the contracted price and thus will sustain a loss. If the price is lower, he will have made a good sale and thus will make a profit. The short makes money if the price goes down.

If an individual sells something, anything, for more than he paid for it, he makes a profit. Whether he buys it first and then sells it or sells it first and then buys it makes no difference.

In a futures market, for every long there is a short. You cannot buy a cow unless someone else sells a cow. If there are contracts to buy and take delivery of 103 million bushels of wheat, there must also be contracts to sell and make delivery of 103 million bushels.

Offsetting contracts. As we will note in a later section, futures contracts usually serve purposes other than the transfer of title of commodities. Most contracts never mature, but instead are offset. During the decade from July 1950 through June 1960, 7.4 percent of the wheat and 7.3 percent of the soybeans traded were settled by actual delivery.

Contracts are offset by making opposite transactions. Suppose that during February a customer of a commission house sells 5,000 bushels of July corn at $1.25. He is short, committed to sell and deliver. Suppose further that the price goes down to $1.22. He reads that the Argentine corn crop has turned out to be less than was earlier estimated. From this information he reasons that the price of corn will go up. He wishes that he could now buy the 5,000 bushels that he is committed to sell and deliver in July for $1.22. So he does. He simply buys 5,000 bushels of July corn at $1.22. He is now short 5,000 bushels for July delivery and long 5,000 bushels for July delivery. From this time forward what he makes on one side he will lose on the other.

He does not need to wait until July to receive from one and pay the other. In fact he is not allowed to wait. There is no reason to have both contracts cluttering up the records. The second is offset against the first and the whole business is canceled. All that remains is to settle the monetary difference. He sold for $1.25 and bought for $1.22 and so has three cents a bushel, or $150, due him. From this total must be subtracted a commission fee of $22, leaving a net of $128. This amount is posted to his account with the commission futures merchant. Incidentally, commission is charged on a package basis, with one fee covering both the original and offsetting transaction.

Clearing house. The volume of trading greatly exceeds the amount delivered. Individuals can offset contracts at will. These things together complicate settlement procedure. In our example above, our broker may have traded with a broker who was acting for a housewife in Sacramento, California. When we decided to offset, it would have been difficult to negotiate with the housewife. Instead our broker bought from the highest bidder at that moment, say a corn alcohol distiller. This bouncing around can and does go on for several trades. How is it all finally settled so that money is paid to and received from the appropriate people?

It is done through a device called the Clearing House.[1/] The Clearing House is a subordinate organization of the exchange. At the end of each day's business, the Clearing House becomes a party to all trades. It becomes the buyer to all sellers and the seller to all buyers. It is thus in a position to match all offsetting contracts, charging the accounts of all traders who have lost money and crediting the accounts of all who have gained. Thus contracts become highly impersonal and readily negotiable.

Lest we leave erroneous impression, we should emphasize that futures contracts are binding, enforceable contracts. If the buyer wishes to take delivery, he can simply stay long until delivery is made. He must either offset by selling or take delivery and pay for the grain. The opposite is true of the seller. He must either make an offsetting purchase or deliver the grain at the agreed price.

1/ This is an oversimplification of clearing procedures, inaccurate in detail but accurate in effect.

Margin. Each customer of a commission merchant and each member of the Clearing House must make a deposit of funds, called margin, to guarantee performance on contracts.

The Clearing House is liable for the transactions that it has accepted from its members. It guarantees performance on all contracts. There is never the slightest doubt but that the customer will either receive his profits or pay his losses.

The commission merchant is liable to the Clearing House for the trades of his customers. Under the rules of the exchange, the commission merchants must require certain minimum margin deposits from their customers. The exchange establishes the amount of minimum deposit. The merchant may, at his discretion, require larger than minimum deposits. The amount of the margin tends to be about 10 percent of the value of the commodity, although there may be large deviations depending on the commodity and market conditions. It may be as little as 5 percent or as large as 20 percent. It is generally set at the lowest level that the exchange thinks is a safe guarantee.

In addition to the initial margin requirement, a maintenance margin is also required. The maintenance margin is the amount below which the position value must not be allowed to fall. There is a tendency for the maintenance margin to be set at about 75 percent of the original margin.

The commission merchant may call for additional margins at his discretion, but whenever the customer's margins are depleted below the minimum, he must call for additional margins; and if within a reasonable time the customer fails to bring his margins up to the minimum requirement, the broker must close out the customer's trades in an amount sufficient to bring the margin deposit up to the minimum requirement.

The maintenance margin brings up a concept of profits and losses that needs to be understood before the margin system becomes clear. Profits and losses are realized as the market value of the commodity goes up and down, even though the contract is still in effect. It is against the current position value that maintenance margins are computed. Suppose that a customer buys 5,000 bushels of July corn at $1.25. The initial margin requirement is five cents a bushel, or $250, and the maintenance margin is four cents a bushel, or $200. If the customer deposits the minimum initial margin, the account value at the outset is $250. Suppose that on the first day the price goes up one cent. The customer could, if he wished, sell at a profit of one cent, or $50. The account value is $300. Suppose that on the second day the price goes down 1 1/2 cents for a loss of $75. The account value is now $225. Suppose on the third day the price goes down one cent for a loss of $50. The account value is now $175, which is less than the maintenance margin of $200. The commission merchant must now contact the customer and call for an additional margin deposit. If the customer fails to respond, the commission merchant must sell out the position. If this is accomplished at the current price, the merchant subtracts his commission of $22 and will, if asked, remit the balance of $153 to the customer.

The point is that not only is the original position guaranteed by a margin deposit, but the contract is kept guaranteed by the provision of maintenance margins.

The Economics of Futures Trading

To this point we have been describing futures trading as an activity. We now turn our attention to what it does as an economic institution--to the purposes it serves in the marketing of commodities, especially grains.

This system has developed and persists because it serves useful economic functions. It adds to the productivity of the economic processes; it adds to the utility that the marketing system provides. If this were not so, it would not have been continued in use as a part of the system of grain marketing system for about 100 years. Had there been, by this time, a better method of accomplishing the jobs that futures trading performs, such a method would have been adopted.

Futures trading is a part of the real commercial world. Contracts are real contracts involving actual grain. If the long stays long, he will get delivery; and if the short stays short, he must make delivery. Thus the factors affecting futures prices are the same as those affecting prices of cash grain. And the factors affecting the trading in futures contracts are the same as those affecting the trading in cash grains.

Futures trading grew out of the need for the performance of certain functions in marketing. It started with cash trading and gradually evolved into its present form.

A brief look at the origin of futures trading establishes this point. The system evolved gradually between 1850 and 1870 at Chicago. The Illinois-Michigan Canal linking the Illinois River and Lake Michigan was opened in 1848. There immediately sprang up businesses along the river engaging in buying corn from farmers for shipment to the rapidly growing village of Chicago. They had to buy the corn from farmers during the winter when the country roads were frozen and passable. Unfortunately, they could not immediately ship the corn to Chicago because when the roads were frozen so were the river and canal. They had to pay cash for the corn and hold it in storage until the spring.

Most of these merchants used up all of their own capital in building the cribs. Their bankers were not enthusiastic about lending them money to buy the farmers' corn when they had to take a chance on what would happen to the price during the months that the corn was in storage.

These merchants quickly developed the practice of going to Chicago and selling corn to Chicago merchants for delivery in the spring. These contracts were made at firm prices. Thus the country merchants were no longer subject to the risks of changes in prices. The first record of one of these contracts was found in the newspapers in early 1851.

The country merchants found that the Chicago corn merchants were not always the highest bidders. Sometimes other people not connected with the trade in grain would bid more. These people were financiers, building contractors, lawyers, etc.

During the mid-1850s prices rose sharply and varied greatly because of war in Crimea. Later the Civil War put great demands on the Chicago corn trade, and prices rose further and became highly variable.

Trade in forward contracts for grain became quite brisk, some contracts changing hands several times before delivery was actually made. The general public as well as the grain merchants became heavily involved in this trade.

By the late 1860s the contracts were standardized, the time and place of trading were regularized, and trading rules were adopted. From this beginning futures trading evolved and developed into its present form. The trading in wheat followed closely behind that of corn. Trading in butter and eggs evolved during the period from 1900 to 1920, and in soybean oil and soybean meal during 1946 to 1951. The histories of futures trading of these commodities are similar. In each instance existing practices of forward contracting were codified into formal futures trading.

The exact point at which the informal trading in futures contracts became futures trading cannot be identified. They are, in essence, the same thing. The need arose for shifting the risks of price change from the storers of inventory to people better able to finance the inventories and sustain the losses involved in assuming price risks. A system for shifting risks evolved.

Five functions of futures trading should be listed: (1) publicity and information, (2) regulatory, (3) financing, (4) risk shifting, and (5) pricing.

Publicity and information. The widespread interest in futures trading and the precision with which futures prices are quoted results in more extensive publicizing of prices than would probably otherwise exist.

Futures trading results in the development and dissemination of a lot of market information about production, use, receipts, shipments, storage stocks, etc. There is probably more of this information available than would otherwise exist.

The more that is known about trading and the conditions affecting trading, the more competitive a market becomes. Competition in markets is useful in assuring fair treatment for all.

Regulatory. Futures trading is closely regulated, both by the exchanges and by the USDA. Such regulation tends to reduce the possibility of price manipulation and the exercise of monopolistic positions. In so far as regulation assures a better balance of power, competition is increased.

Futures trading is much more closely regulated than cash trading. Practices that are illegal in futures markets are legal in cash markets.

Financing. A substantial proportion of the cost of marketing is the financing of inventories. Shifting risks of ownership away from inventory holders greatly reduces the cost of capital needed to carry inventories. Specifically, a high proportion of the money needed to carry hedged inventories--say 90 percent--can be borrowed at minimum interest rates. The proportion that can be borrowed on unhedged inventories is smaller, and the rate higher.

Risk shifting. Futures trading, as we have seen, developed out of existing practices of forward contracting that had arisen because of the needs of merchants to shift the risks of price changes. Risks are shifted by the process of hedging.

To hedge is to take a position in futures equal and opposite to an already existing cash position. If a merchant has a stock of 100,000 bushels of corn in his elevator, he is long cash corn. If the price goes up, he makes money. It it goes down, he loses money. He is subject to the risk of a price decline. He can offset this risk by selling 100,000 bushels of futures contracts. By selling, he becomes short futures. He is thus long cash and short futures; he is hedged. So long as cash and futures prices move up and down together, what the hedger makes on the one position he will lose on the other, and thus he will neither gain nor lose from a change in price.

Our hedger has shifted his price risk of ownership to the purchaser of the futures contracts. Thus the process of hedging is the shifting of risks from people who have inventory positions (either long or short) in cash grain to the people who are on the opposite end of the offsetting futures contracts.

We can best see the nature of the risk-shifting process by looking at the open interest. The open interest is the amount of unoffset commitments in futures. It is the quantity of a commodity represented by outstanding contracts.

The Commodity Exchange Authority requires that each person whose position exceeds 200,000 bushels report daily the nature of the position and whether he is hedging or speculating. The sum of these reports is published. We thus have a knowledge of the structure of the open interest as it is divided into three categories: (1) reporting hedgers, (2) reporting speculators, and (3) nonreporting traders. Special surveys of the market show that nonreporting traders are predominantly speculators.

Table 1 and Figure 1 show the net positions of the three categories of traders in soybean futures for the three years from mid-1958 through mid-1961. The net positions were obtained by subtracting the short from the long if the category was net long and vice versa if the category was net short.

At the beginning of each crop year, the positions of all three were quite small. At the time of harvest, the short position of hedgers built up very rapidly. For every short there must be a long. The long positions of the reporting speculators and nonreporting traders also increased rapidly. All positions tended to reach their peak levels soon after the end of harvest and subsequently gradually declined until the next harvest.

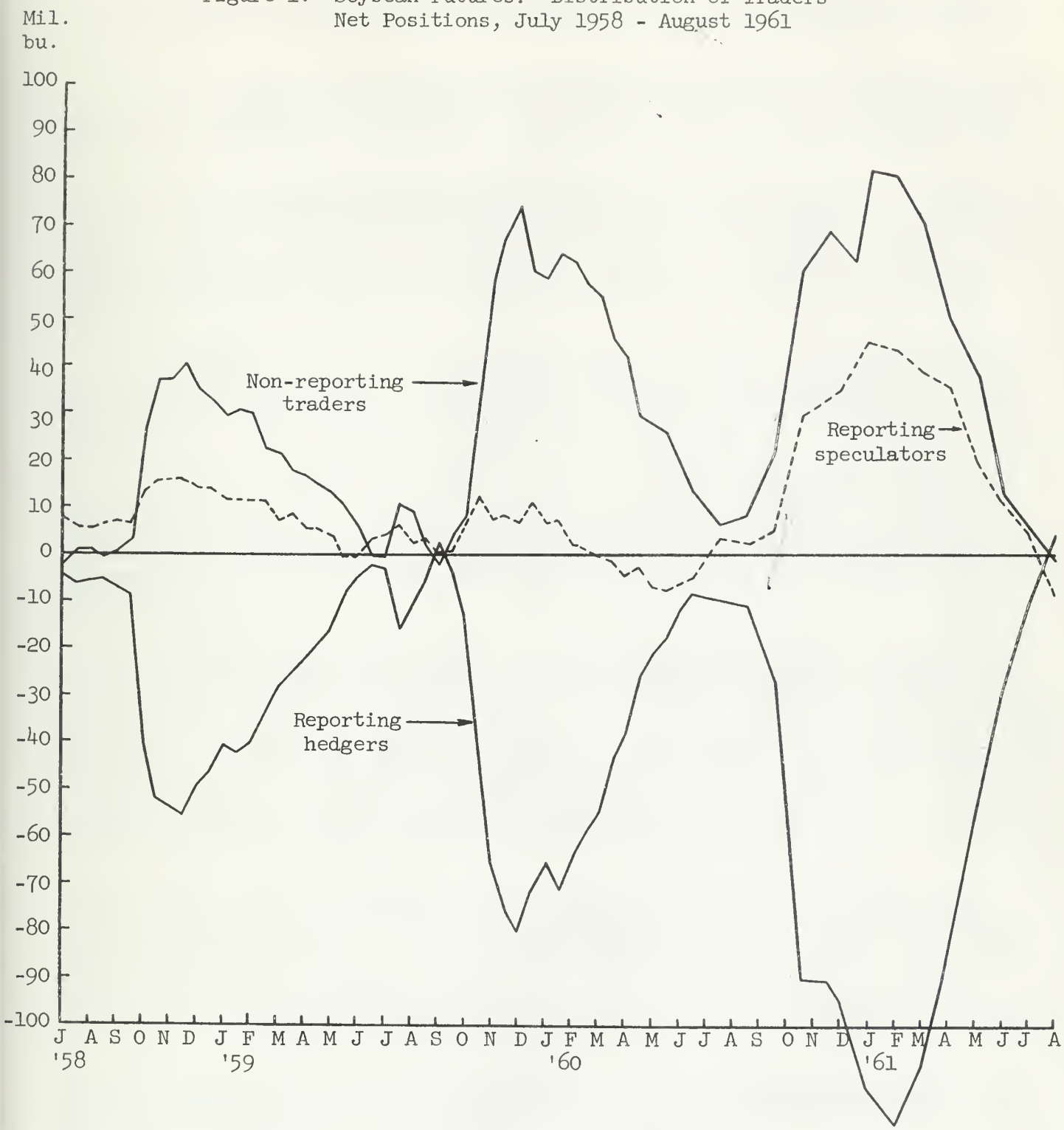
The regularity of this pattern results from the pattern of hedging. Farmers sell soybeans more rapidly at harvest than they can be used. Processors and warehousemen accumulate large inventories (long) of cash soybeans. They hedge by selling (short) futures contracts. Processors and warehousemen regularly hedge their cash inventories. Their position in futures is a mirror (opposite) image of their cash position. The pattern is not precisely the same each year. In 1960 to 1961 the open interest did not reach a peak until the end of February. Farmers

Table 1.--Month-End Net Position of Reporting Hedgers, Reporting Speculators, and Nonreporting Traders, All Soybean Futures, July 1959 - August 1961

Month	Nonreporting traders (000 bu.)	Reporting speculators (000 bu.)	Reporting hedgers (000 bu.)
1958			
July	+740	+5,810	-6,550
August	-289	+6,145	-5,856
September	+2,954	+9,314	-9,314
October	+36,914	+15,438	-52,352
November	+40,431	+15,378	-55,809
December	+32,956	+13,599	-46,555
1959			
January	+30,699	+11,507	-42,206
February	+22,828	+11,329	-34,157
March	+17,664	+8,331	-25,995
April	+14,192	+5,232	-19,424
May	+9,403	+432	-8,971
June	-537	+3,102	-2,565
July	+10,651	+6,025	-16,676
August	+1,636	+3,815	-5,451
September	+3,595	+1,072	-4,667
October	+30,576	+12,603	-43,179
November	+67,840	+8,101	-75,941
December	+60,195	+11,127	-71,322
1960			
January	+63,906	+7,677	-71,583
February	+57,219	+1,621	-58,840
March	+44,436	-1,627	-43,836
April	+29,083	-2,271	-26,812
May	+26,061	-7,826	-18,235
June	+13,577	-5,069	-8,508
July	+6,190	+3,640	-9,830
August	+8,187	+2,570	-10,757
September	+21,704	+5,181	-26,885
October	+61,104	+29,308	-90,412
November	+68,857	+21,833	-90,690
December	+62,357	+37,130	-99,487
1961			
January	+83,052	+34,940	-117,992
February	+81,173	+41,721	-122,894
March	+71,776	+38,709	-110,485
April	+50,605	+33,797	-84,402
May	+36,243	+20,793	-57,036
June	+12,849	+16,907	-29,766
July	+7,868	+4,395	-12,263
August	-88	-970	+1,058

+ = Long
- = Short

Figure 1.--Soybean Futures: Distribution of Traders' Net Positions, July 1958 - August 1961



sold a large quantity of soybeans at harvest and continued to be liberal sellers after harvest so that processors' stocks did not reach a peak until later than usual.

As soybeans are processed and exported, the hedgers buy back the futures contracts that they sold in hedging. This accounts for the pattern of decline in their short positions.

The long positions opposite the short positions of hedgers are held by speculators. The succession of events is that, at harvest, farmers sell to country elevators, who sell to processors and others, who hedge. Hedging is, in effect, a matter of selling to speculators. Thus risks of price change are shifted from farmers, through the marketing system, to speculators in futures markets.

It is useful to regard the reporting speculators as a balance wheel in the open interest. They pick up the risks that the nonreporting traders do not want, and they supply the nonreporting traders by going short when the supply of hedges is less than nonreporting traders wish to be long.

It is interesting to note that reporting speculators held an unusually large share of the long position in 1960 to 1961. This was the year of wildly gyrating soybean prices. At the time there was much talk of the speculating public running the price up, etc. The open interest reveals that they were reluctant dragons indeed and that we must look elsewhere for an explanation of the price variation.

The major part of the hedges is carried by nonreporting traders, who are, in fact, the speculating public. A special survey[1/] of the open contracts in soybean futures as of November 30, 1959, listed the occupations of 7,311 speculators active on that day. About 1,000 of them were directly connected with grain marketing as operators of elevators, exporters, processors, etc. The largest single group, 1,617, were farmers. There were also doctors, dentists, lawyers, chemists, engineers, teachers, television operators, bankers, salesmen, clerical workers, machinists, private detectives, housewives, students, retired, and unemployed, to mention only part of the list. These are the risk takers.

The essence of this discussion is to point out that the main thing futures trading does is to shift risk from hedgers of cash inventories to speculators in futures markets. Futures market speculators are essential to the operation of a hedging system. It is generally agreed that hedging reduces the cost of operation of grain marketing firms and processors. The system succeeds in shifting risks of price variation from people who are not in a position to speculate to people who are in a position and wish to speculate.

Pricing. The speculative pricing function of futures trading is a secondary or derived one. But it is perhaps a more important function than risk shifting. Speculation should and does influence prices.

Prices of seasonally produced commodities are speculative. The supply that is harvested during a short period of time must be made to last until the next crop is available. At the same time, the supply must be used down to a

1/ USDA, CEA, Soybean Futures Trading, 1959 to 1960, p. 17.

small carryover to the following year. This job of rationing the supply is a function of the price. There is one and only one average price that will make the supply just clear the market. If the price is held at higher levels, some of the users will be priced out of the market and there will be more than a necessary carry-over. If the price is held at lower than the equilibrium level, additional users will be drawn into the market and the supply will not last until the next harvest.

When allowed to work, market prices effectively accomplish the necessary job of rationing. No matter how short the crop, we never run out. Enough users get priced out of the market to leave something when the new crop is harvested. No matter how large the increase in the crop, new users are brought into the market by bargain prices; and even though there is a substantial carry-over, the expanded use makes an inventory to add to the supply for the next year appear desirable.

If, as the growing season develops, a large supply makes a carry-over to the next year appear unnecessary, a decrease in price generates additional use so that the amount carried over into the new crop year is reduced to a minimum. Similarly, if the growing crop appears to be short, an increase in the spot price starts the rationing process so that a reserve is carried over.

From this explanation it is apparent that at all times there are two kinds of demands. One is demand for current use and the other is demand for inventory for use at a future time. If it appears that the supply is short at the current price, the demand for inventory increases, bidding prices up and slowing down the rate of use. If it appears that the supply will move the rest at the current price, the demand for inventory decreases, reducing prices and speeding up the rate of use.

At any given time the price is the result of interplay of the two forces and just strikes a balance between them. Thus, in the short run the price depends on the decisions of inventory holders. The question that an inventory holder asks is simple: "Shall I sell or hold?" His answer depends upon whether he thinks the price is going up or down.

The inventory holder must forecast prices. He must look ahead and appraise the effect on price of changes in supply and in requirements for various uses. This is a very complicated and difficult job, as is well known to all people, farmers in particular, who have tried to unscramble the price outlook.

At any given time the price at which inventories are held out of use is the result of a balance of judgments of the holders of inventories. On the one side the people who think the price is going up hold, and on the other side the people who think the price is going down sell. If the balance of judgments is that the price is going down, selling quickly puts it down, and vice versa. All things that are expected to affect the future price are quickly discounted in the current price so that it reflects the composite judgment of the equilibrium price. Thus the composite judgment of all of the market participants is that the price will not change.

Obviously they are always wrong. Prices do change. This is because some things are not yet foreseeable, because the market does not foresee all of the things that are foreseeable, and because the market does not weigh properly the things that it does foresee. If the market were omniscient, able to foresee all things and weigh them properly, the price would never change. Changes in price thus are the result of speculative error.

The owners of inventory are speculators. They have taken a position at the risk of loss and in the hope of profit. He who holds an inventory is speculating. He is pitting his judgment about the direction of price change against the market by deciding to hold rather than sell. If he is right, he makes money; if wrong, he loses.

The most important speculators are farmers. They hold more of the inventory than any other group. Probably the second most important inventory-controlling group are speculators in futures markets. Basically they are long the amount that hedgers are short. Hedgers, being both long and short, do nothing more than act as custodians. Until users outbid speculators, hedgers must hold grain in store. The hedgers buy back their short futures contracts so that they can sell the cash commodities to users.

In addition to being a risk-shifting medium, futures trading is a system of discounting expectations into current prices. The test of a speculative market is in price variation. It must work toward stability of price. The test of a particular system of speculative pricing, such as futures trading, is in whether the resulting price variation is greater or less than it would be in the absence of the system.

The effect of futures trading has been much argued, but with no final conclusions.[1/] One thing, however, is clear: The price of grain at harvest is higher with futures trading than it would be without it. As is clear from Figure 1, speculators buy from hedgers at harvest. They pay more than the price at which hedgers are willing to accept the risk of ownership. If this were not so, hedgers would not hedge.

A frequent question is, "Why should the hodgepodge of people identified as the speculating public be qualified to establish prices?" What a speculator is trying to do is forecast price. If he does this better than the average of all the people who speculate, he will make money; if not, he will lose. Losing money is a discouraging thing. The chronic losers quit, and those who profit stay and trade in larger volume. Futures markets act as continuous spell-downs of speculators.

It is not unreasonable that a physician, teacher, or machinist may be a competent forecaster--it is just unlikely. But very few of all people in a particular occupation speculate in commodities. The market has sorted them out and kept only the good ones.

1/ For a fairly complete discussion, see Bakken, Gray, Paul, and Hieronymus, Futures Trading Seminar, MIMIR, Madison, Wisconsin, 1960, Part III.

Cash and Futures Price Relationship

The key to the effective use of futures markets by farmers is understanding the relationship of cash and futures prices. While these relationships are variable, they are systematic so that they can be forecast within fairly close limits.

Basis. The basis is the price of cash grain at the delivery point in relation to the nearby or dominant futures. If in, say, February, we say that the corn basis is 2 over, we mean that No. 2 yellow corn at Chicago is selling for 2 cents more than the March futures.

Statements of basis can be modified by location and by time. For example, we can say that the east-central Illinois basis is 7 under or the New Orleans basis is 14 over, in these instances designating a location different from the delivery point but again referring to the nearby future. It is sometimes useful to refer to the cash price in relation to a more distant future. For example, in October we may be concerned with the price of soybeans at local elevators in relation to the May future. In this case we would say that the farm basis is 20 under the May.

The important basis is the one that applies to the individual user. It is important that the user of futures markets become familiar with the changes in his own local basis.

Cash and futures prices. During the delivery month, at the delivery point, cash and futures must be equal. If on March 1 cash corn were five cents below the March future, merchants would buy cash corn, sell futures, and make a five-cent profit. Such an obvious thing would be quickly erased by the actions of many people. Similarly if cash corn were five cents above futures, the users of cash corn would buy futures and take delivery as the cheapest source of supply. Thus, lacking demand, the cash would quickly decline.

But the cash price is typically higher than the futures at Chicago during the delivery month. This fact does not violate the principle stated above. It results from certain technical differences in the value of cash grain in boxcars and grain taken on delivery of futures contracts. These differences have to do with the time of delivery, quality of the grain, place of delivery, loading-out charges, and freight rate structure. This Chicago difference is not of concern to farmer users of futures.

The forcing of cash and futures together during the delivery month forces futures prices to reflect values that exist in the trading of cash grain. Because of the delivery provision for futures contracts, prices of cash and futures and futures for different delivery months are rationally related.

Theory of the carrying charge. The theory of the carrying charge is that, because there are costs of storing cash grain and there are virtually no costs in holding futures contracts, cash prices gain in relation to the futures during the storage period. Costs of storing cash grain include the investment in and depreciation of the structure; operating costs, such as labor, repairs, and

maintenance of quality; property taxes; and interest on funds tied up in cash grain. Thus the price of grain at harvest should be below the futures by the cost of storing until the maturity of the future.

Figure 2 illustrates this theory. It relates to corn. The price during the planting and growing season is below the December future by the cost of storing from harvest until December. The December, in turn, is below the March by the cost of storing from December to March, etc.

Locational differences. The second part of the theory of the relationship of cash and futures is that the difference in prices at locations away from the delivery point depends upon transportation cost and the place of the outside location in the flow stream of grain.

Figure 3 illustrates the three major kinds of locational differences. The first case is one in which the local price is under the delivery point price by the cost of transportation to the delivery point when the flow of market grain is to the delivery point market. This illustration involves corn from northern Illinois. The main flow of corn from the area is to Chicago. Thus the local price tends to be equal to the Chicago price minus freight. This is the most regular and dependable basis relationship.

The second case is that of equalization to a common destination. Let us say that during most of the year Chicago ships corn to Baltimore for export and that central Ohio points also ship corn to Baltimore for export. The price in central Ohio will be higher than the Chicago price by the difference between the freight cost between Ohio and Baltimore and Chicago and Baltimore. This relationship holds exactly only so long as both points ship to Baltimore (or some other common destination). If a local shortage develops in Ohio, corn will be priced too high to move to Baltimore and the Ohio price will exceed Chicago by a larger than usual amount.

The third case can be called multiple destination. It is best illustrated by east-central Illinois. Corn moves from this area to many major destinations, including Illinois processors, Peoria, St. Louis, Kentucky, Georgia, New Orleans, Baltimore, and Chicago. These are the most important ones, but there are others. When Chicago is the best outlet, the price is under Chicago by the transportation cost. When other destinations are better, the price will be closer to Chicago than the transportation cost. Out of the multiplicity of destinations can come considerable variation in price in relation to Chicago. Even so, this variation nearly always remains within a narrow and predictable range.

Actual basis. Having looked at the theoretical pattern of the basis and price relationships among the various futures contracts, we now turn our attention to the actual structure. Table 2 and Figures 4 and 5 show the prices and price interrelationships for corn during the 1960 to 1961 crop season.

Figure 5 is the same as Figure 4 except that the July future was set at zero and the other prices were plotted in relation to it. This process takes out the variation in the level corn prices and makes possible a clear picture of the interrelationship.

Figure 2.--Basis Theory--Corn

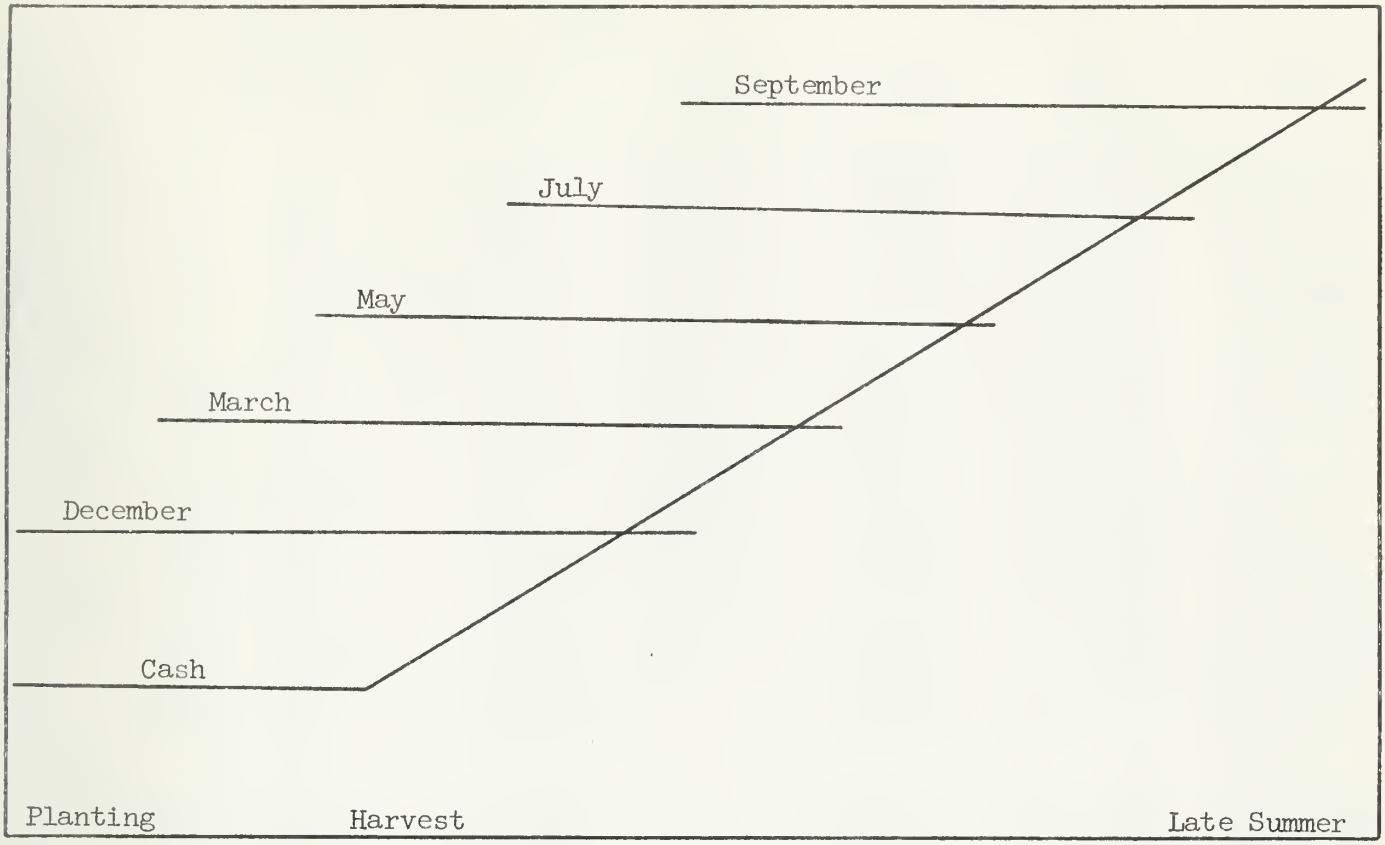


Figure 3.--Location Theory

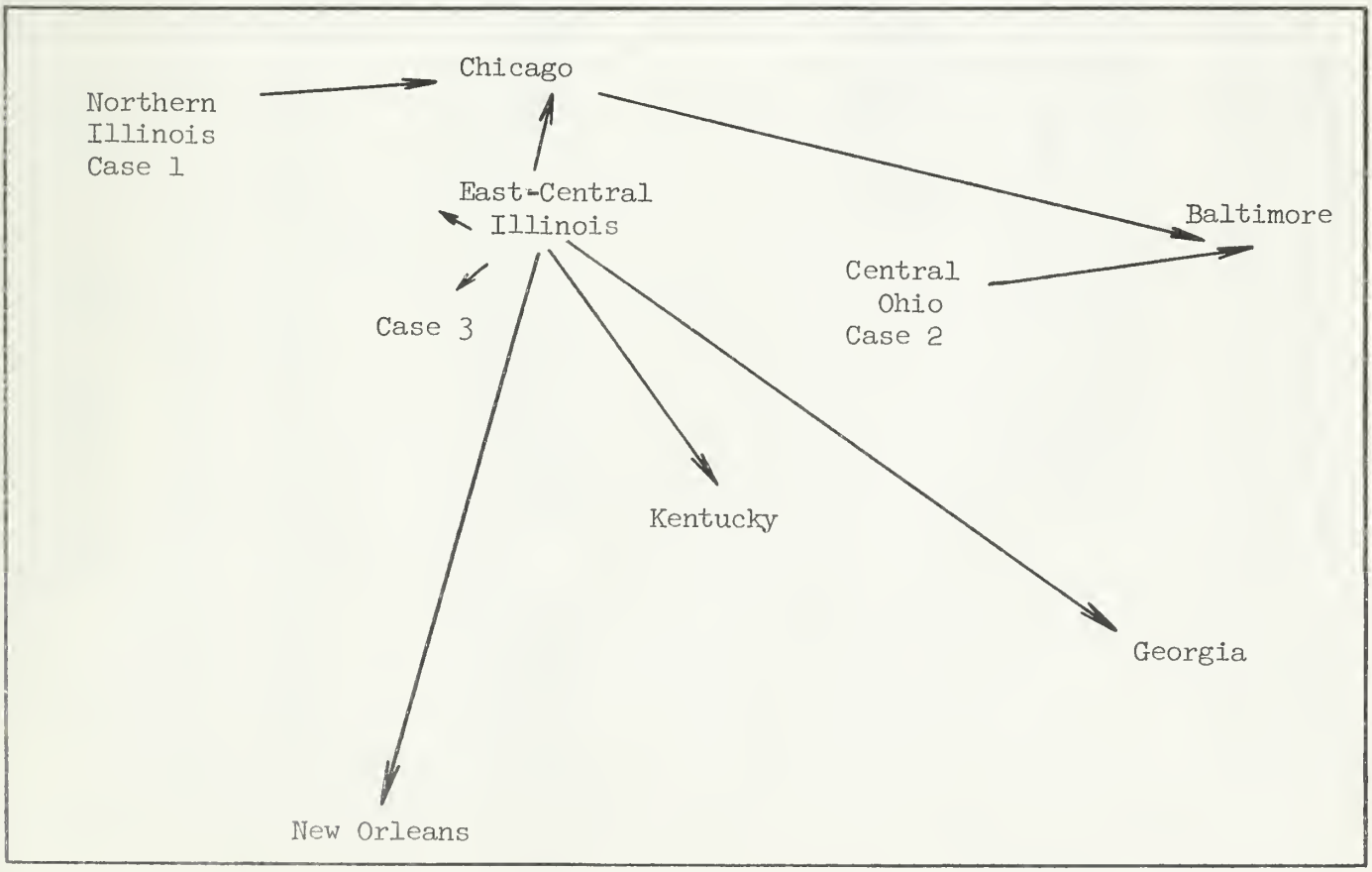


Table 2.--Prices of Cash Corn at Country Elevators, Cash Corn to Arrive Chicago, and December, March, May, and July Futures, Weekly, 1960-61

Date	East-central Illinois farm price	No. 2 Yellow to arrive Chicago	Dec.	March	May	July
1960						
Sept. 2	96	107 1/2	110 1/2	114 1/2	116 3/4	118 1/2
9	96	109 1/4	110 1/4	114 1/8	116 3/4	118 1/2
16	96	108 1/4	109 1/4	113 5/8	116 1/4	118 1/4
23	95 1/2	108	109 3/8	113 5/8	116 5/8	118 3/4
30	96	109 1/4	109 1/4	113 1/2	116 1/2	118 3/4
Oct. 7	95	107 1/2	108 5/8	112 1/2	115 1/4	117 5/8
14	94	107	108	112	115	117 1/2
21	94	107 3/4	109 1/4	113 7/8	116 3/8	118 3/4
28	92	102 3/4	107 1/8	112 1/4	115 1/4	117 1/2
Nov. 4	90 1/2	102 1/4	107 1/4	112 3/8	115 7/8	118
11	86 1/2	99	105 5/8	110 1/2	114 3/8	117 1/8
18	82	91	100 7/8	106 1/4	110 1/8	113
25	83	95 1/2	102 3/8	107 7/8	111 3/4	114 3/4
Dec. 2	88	99	103 3/8	108 1/2	112 1/8	114 3/4
9	93 1/2	101 1/4	104 1/4	109 1/4	112 3/4	115 1/2
16	96 1/2	103 3/4	104	108 3/4	112 3/8	114 7/8
23	98	107 1/2		109 3/4	113 1/4	115 7/8
30	99	108 1/4		109 1/4	113	116
1961						
Jan. 6	100 1/2	110 1/2		112	115 5/8	118 5/8
13	100	110 3/4		111 3/4	115 3/8	118 3/4
20	100 1/2	111 1/4		111 1/2	115 1/2	118 1/4
27	103	114 1/4		114	117 7/8	120 1/2
Feb. 3	107 1/2	117 1/4		117 1/4	121 1/8	125
10	105 1/2	115 1/2		115 1/2	119 5/8	123
17	103	112 1/2		113 5/8	117 1/2	121 1/2
24	105	113 1/4		114 1/4	118 5/8	122 1/4
March 3	104	114 1/2		114	117 7/8	121 7/8
10	105	117		115 1/8	118 1/8	121 5/8
17	104	116		113 1/2	116 3/4	119 7/8
24	103 1/2	112			115 1/2	119 1/8
31	95 1/2	105 1/2			109 1/8	112 5/8
April 7	97	108			109 3/8	113 1/2
14	100	108 1/2			108 7/8	112 3/4
21	102	113 1/2			111 3/8	115 1/8
28	103	114 3/4			111 7/8	116 1/2
May 5	102	113 1/4			111 7/8	115 1/2
12	103 1/2	114 1/2			114	117 5/8
19	103	113 1/2			112 7/8	116
26	103 1/2	114 1/4				115 3/8
June 2	104 1/2	116				116 3/4
9	103	114				115
16	101	112 3/4				113 1/4
23	101	113 3/4				113 3/4
30	102	113 1/2				113 5/8
July 7	102	115 1/2				113 7/8
14	104 1/2	115 1/2				114 1/8
20	103	115 1/4				113 3/8

Figure 4.--Prices of Cash Corn at Country Elevators, Cash Corn to Arrive Chicago, and December, March, May, and July Futures, Weekly, 1960-61

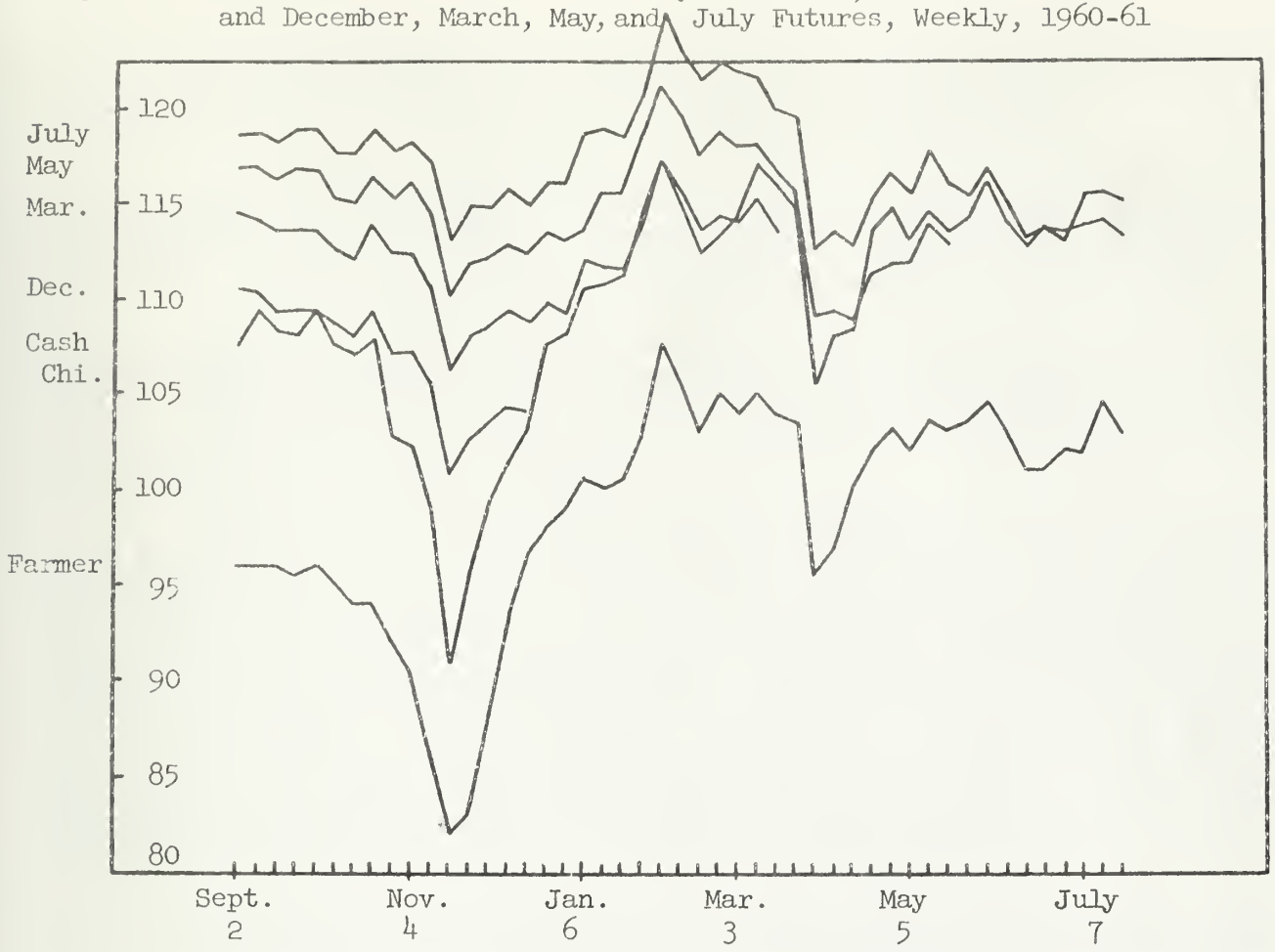
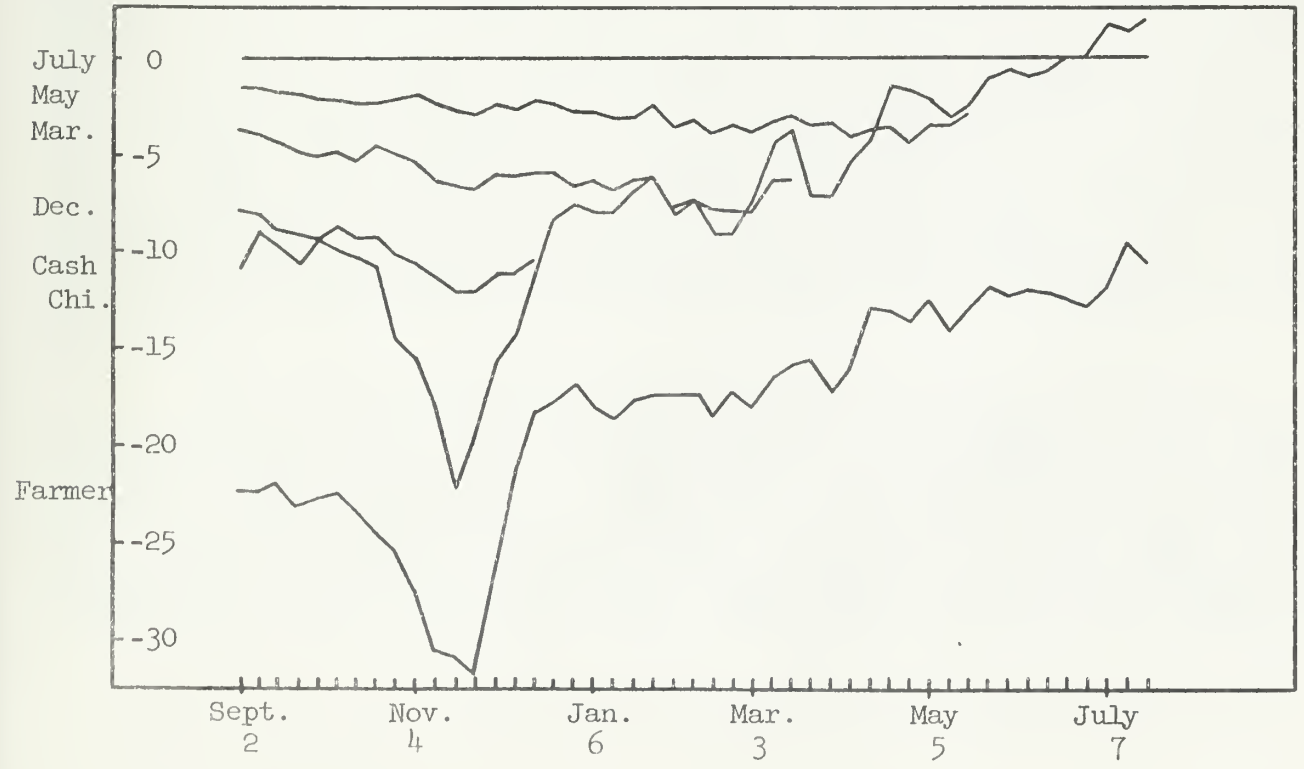


Figure 5.--Prices of Cash Corn at Country Elevators, Cash Corn to Arrive Chicago, and December, March, and May Futures in Relation to July Futures, Weekly, 1960-61



The first general observation is that cash and futures prices tend to move up and down together. Week-to-week changes are nearly always in the same direction, and major changes are of the same general magnitude.

The second general observation is that the general pattern of the basis chart (Figure 5) is the same as that of the theoretical pattern (Figure 2). At the same time there are major differences and a considerable amount of erratic behavior. We must concern ourselves with these departures from the norm.

At the outset of harvest, the price was discounted from the loan by an amount roughly equal to the cost of storage from fall until the end of July. The Chicago cash price was the usual 12 cents over the east-central Illinois farm price. The various futures were above the cash and were related to each other by approximately the cost of storage.

As we moved into harvest, it became apparent that the crop was larger than expected, so there would be a substantial crib overrun to be sold and stored off farms. The crop was also wet, further complicating the storage problem. The entire structure declined. It should be especially noted that three things happened: the price went down, the spreads among the futures increased, and the cash discount under the futures increased. The decline in the price of July corn was the same as the decrease in level of prices, or 5 1/2 to 6 cents. The widening of the spreads and the decrease in cash prices in excess of 5 1/2 to 6 cents was really an increase in the going market price of storage. Put differently, the farm price decrease was 14 cents, of which about 6 cents was a decrease in price and 8 cents was an increase in the price of storing corn.

After the harvest low, the price level of corn varied considerably, but the price interrelationships were fairly consistent with the theoretical patterns.

It is thus apparent that basis behavior is generally consistent with basis theory but is specifically variable. Accordingly we have developed basis charts for the four principal Illinois-produced grains for six crop years and have averaged the six crop years together to give a composite view. The results are shown in Figures 6 through 9, and the data are included in Appendix Tables 1 through 3. In each case the first delivery month applicable to each crop year and the last month not affected by new crop conditions were used. The period for the basis charts extended from before planting for corn, soybeans, and oats and from January 1 before harvest for wheat. Thus each chart covers more than one year, and the time periods overlap. The delivery months used were: corn, December and July; soybeans, November and July; oats, July and March; and wheat, July and March. The use of only two months makes the charts as simple as possible to read.

The first delivery month was used for computing basis until the last day of the preceding month, when the basis computation was changed to the distant delivery month. That is, for corn the December future was set as zero, and the difference between the cash price and December was plotted until the last date shown in November. This basis is scaled on the left side of the chart. Then July was set as zero and above the December, set as zero, by the difference prevailing on the day the change was made. This basis is scaled on the right side of the chart.

For some weeks before the change from December to July was made, July was plotted in relation to December; and for some weeks (as long as it was traded) after the basis month was changed, December was plotted in relation to July.

The charts for the other grains were made in the same way except for the difference in the delivery months.

Corn basis. Figure 6 shows the prices of corn (cash at the farm, December, and July futures) for each crop year, 1955 to 1960, and the average for the period. The top half of each chart shows the actual prices; and the bottom half, the basis as described above.

There are four observations to make about the actual prices. First, there is a tendency for the cash farm price to go up as the season progresses. But during this period it did not always go up, and the amount of the increase varied greatly from year to year. The average of the increase from the middle of October to July was 20 cents a bushel.

Second, in the area of overlap on the charts, futures prices tend to be parallel, rising and falling together while the difference remains approximately constant.

Third, in the large price movements, cash and future prices move up and down by fairly comparable amounts, but they are not parallel in minor fluctuations and there is a tendency for the cash to go up more or decline less than the futures.

Fourth, the average variation in futures prices tends to be small. The erratic individual-year variations tend to average out to zero. This is consistent with the theory of speculative pricing that was discussed earlier. If all known factors are bid into current prices, then the average price tends to vary only by the cost of storage, which in futures contracts is essentially zero. Variations in futures prices result from capricious errors in speculative discounting.

This theory, while tending to be generally true, did not work out perfectly. The period under study was not long enough to allow the errors to fully cancel out. But there is a discernible central tendency for the futures price to decline about seven cents from the planting season to harvest and to increase about five cents into the spring or summer. Is this a regular seasonal variation, or is it due to peculiarities of the period that should not be expected to repeat regularly in the future? This six-year period was one of increasing per acre yield, generally more than increases that were expected. The changes in per acre yield from the preceding year, national average were:

1955	+2.6	1957	+ .9	1959	+ .3
1956	+5.4	1958	+4.5	1960	+1.4

If the market was expecting the same yield as the year before and it became apparent, as the season progressed, that it would be larger, we should expect a tendency for price to decline into harvest. Regular increases yields are discounted into price early, and we should not expect this tendency to exist in the years ahead.

Figure 6a.--Corn: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, December and July Futures and Basis Chart, 1955-56

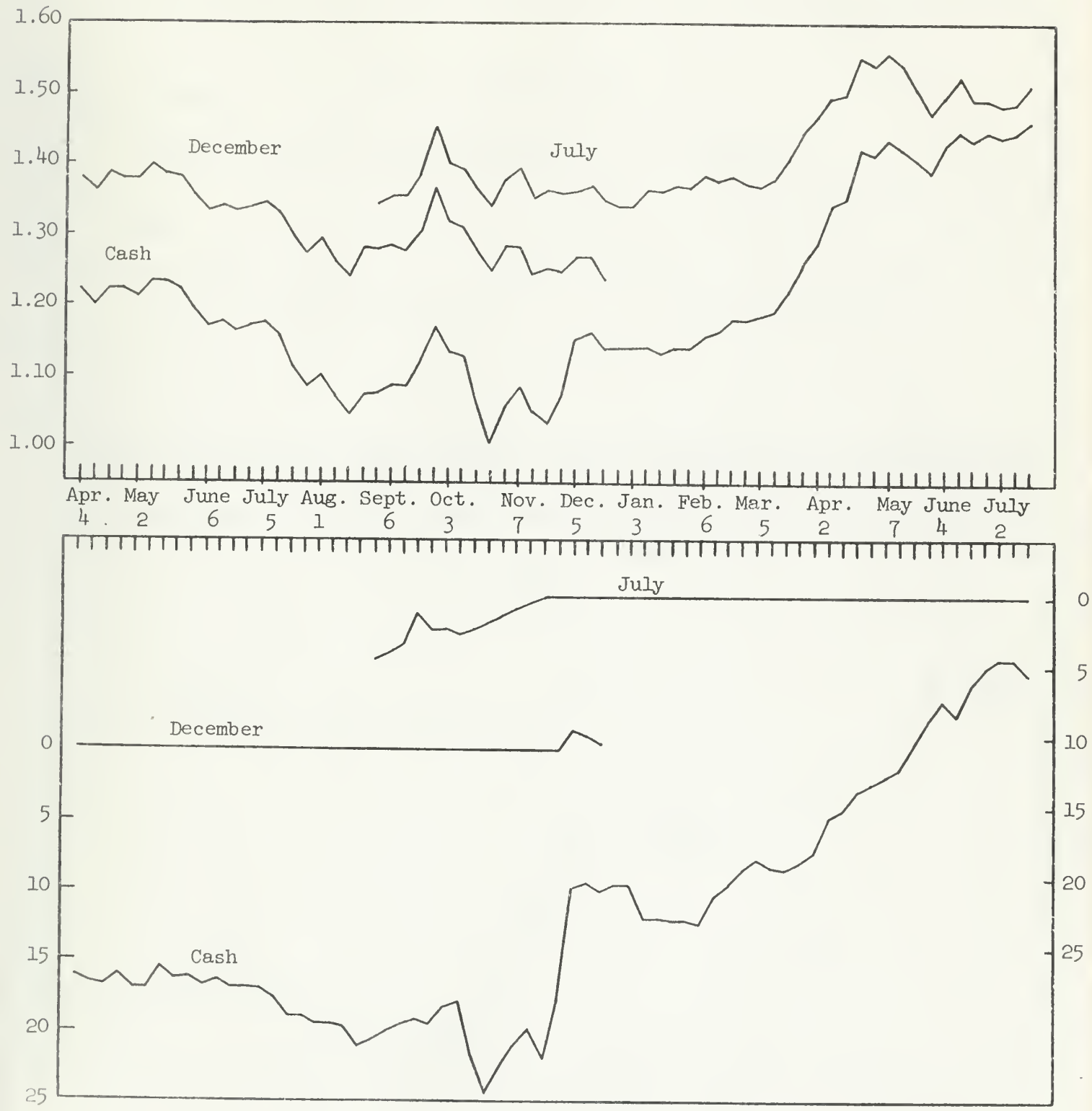


Figure 6b.--Corn: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, December and July Futures and Basis Chart, 1956-57

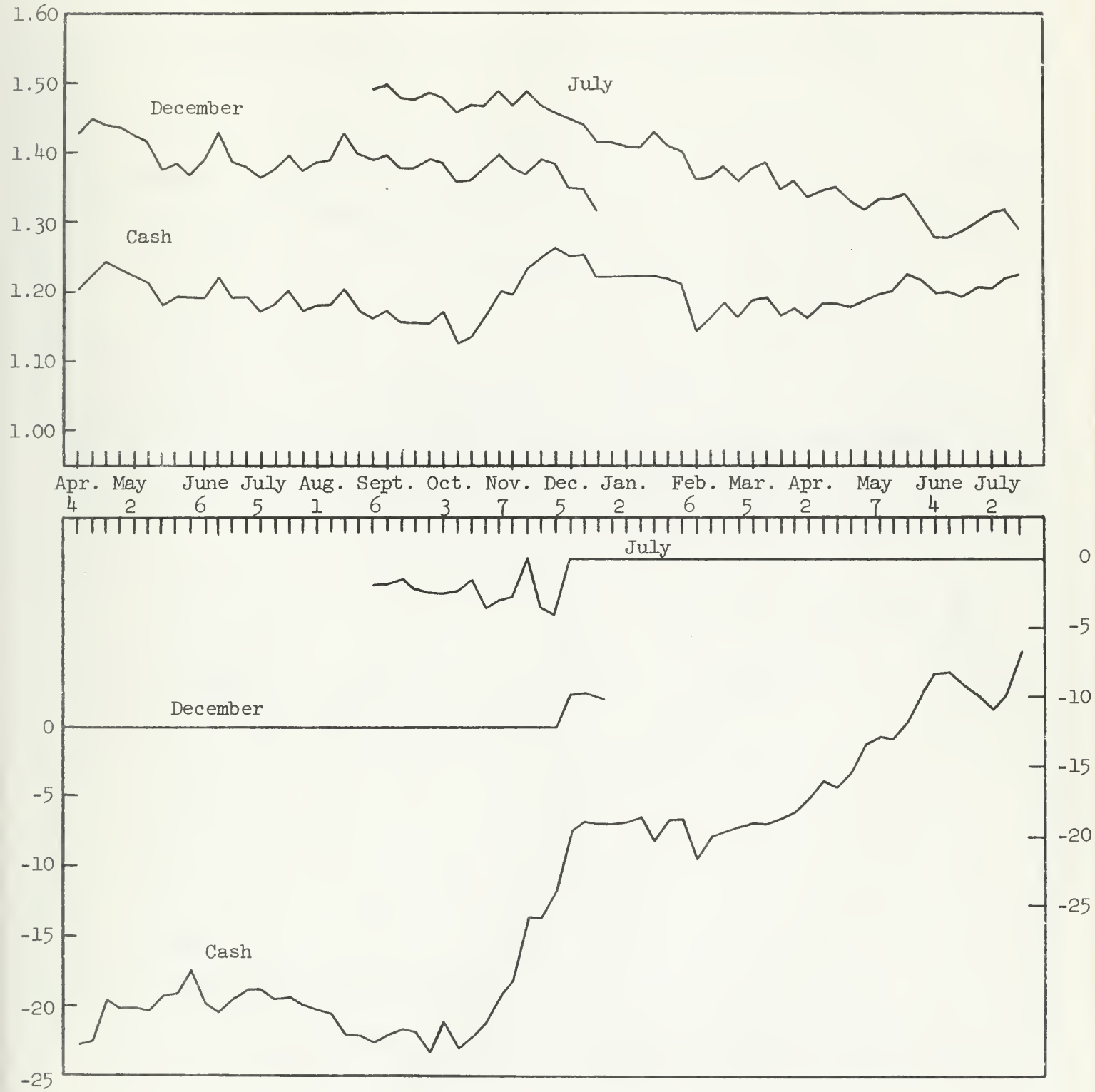


Figure 6c.--Corn: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, December and July Futures and Basis Chart, 1957-58

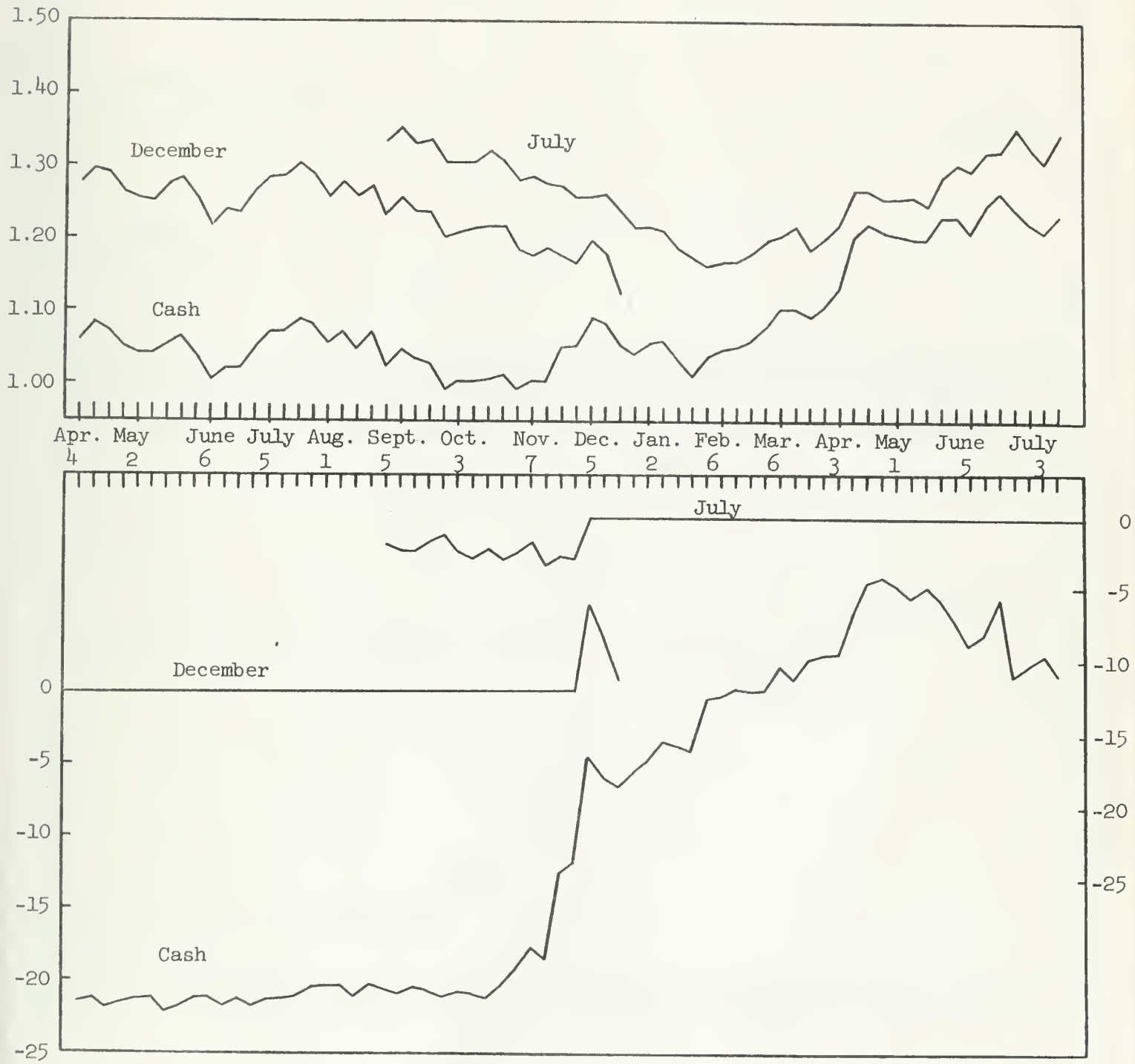


Figure 6d.--Corn: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, December and July Futures and Basis Chart, 1958-59

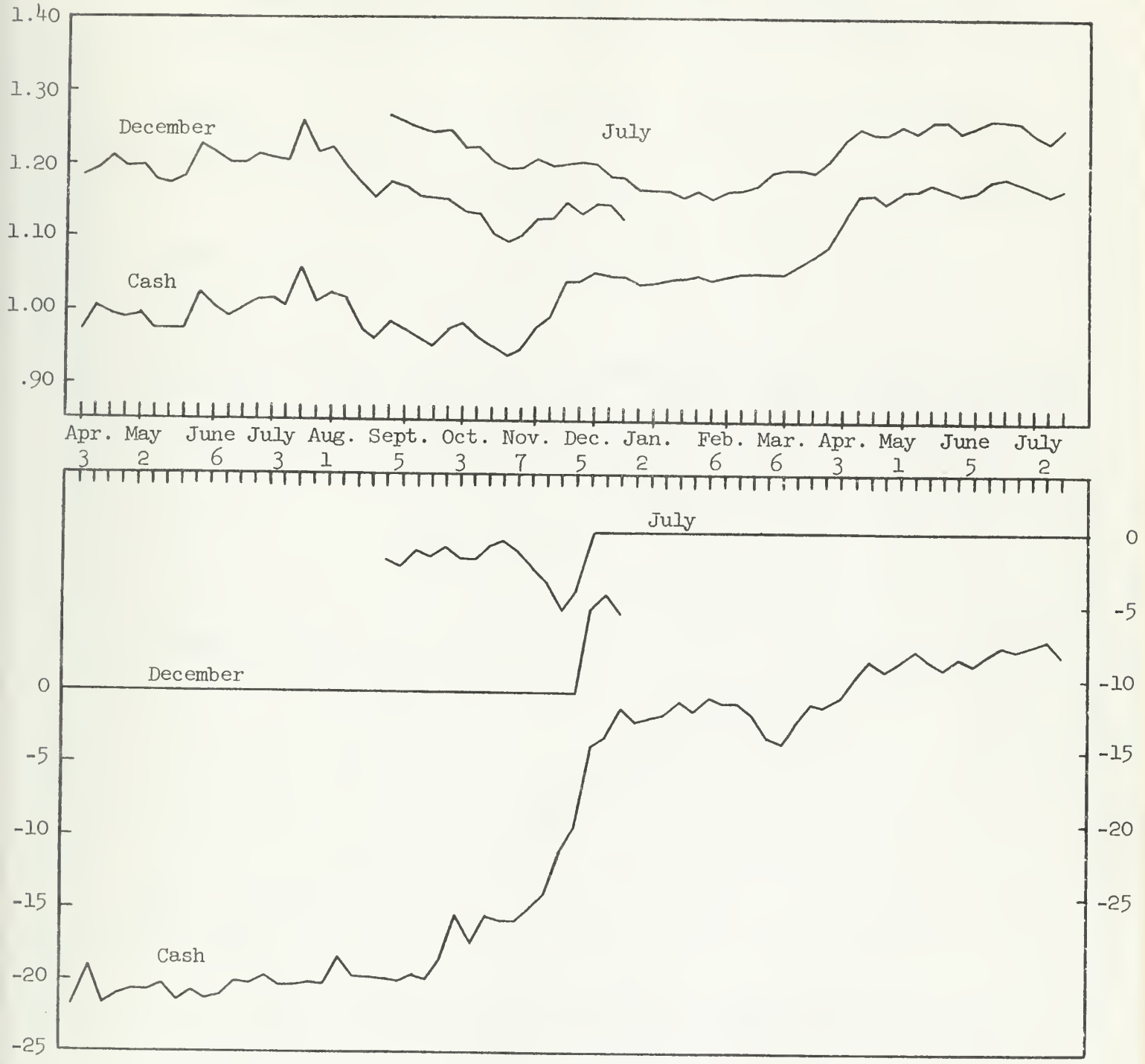


Figure 6e.--Corn: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, December and July Futures and Basis Chart, 1959-60

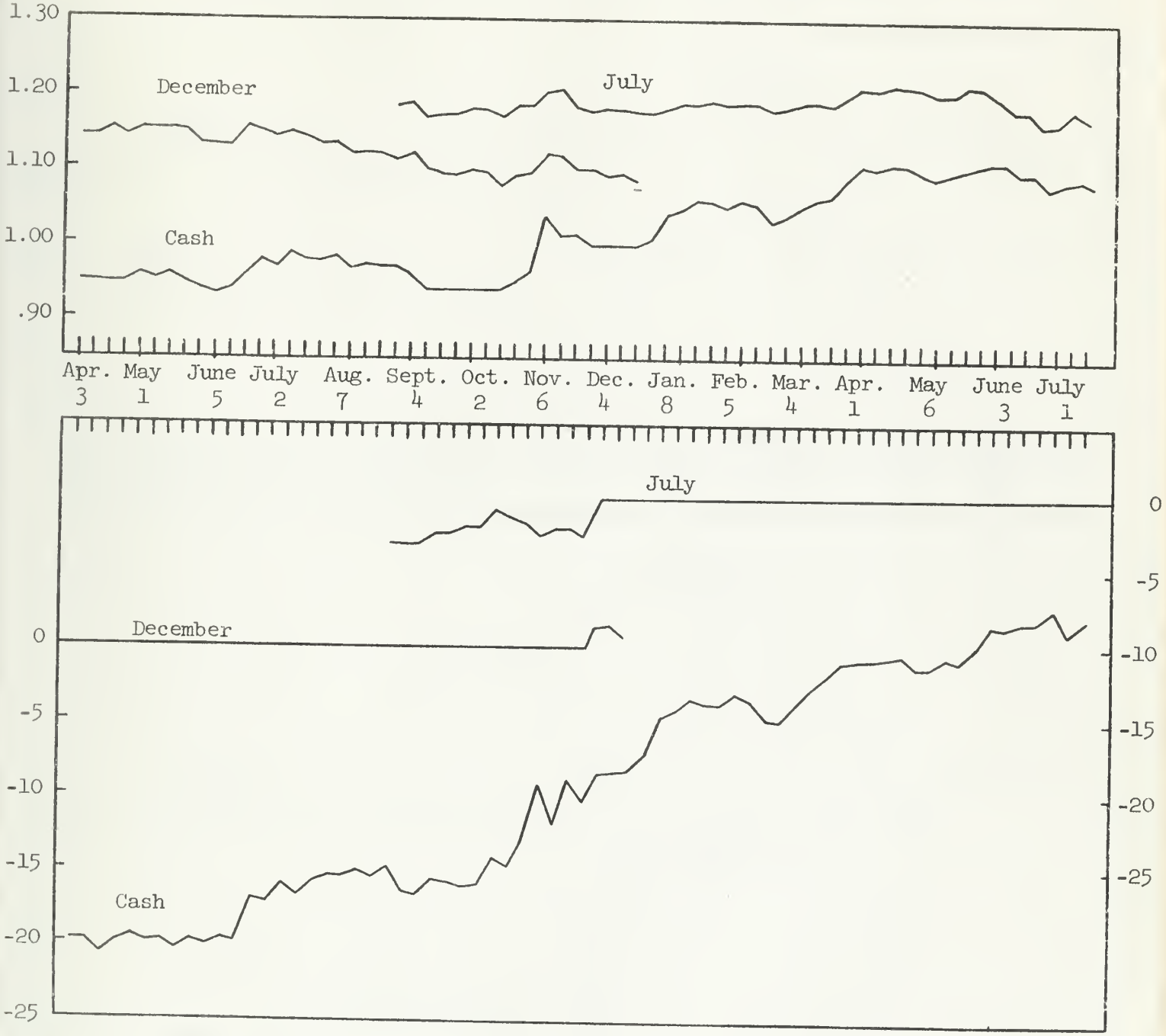


Figure 6f.--Corn: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, December and July Futures and Basis Chart, 1960-61

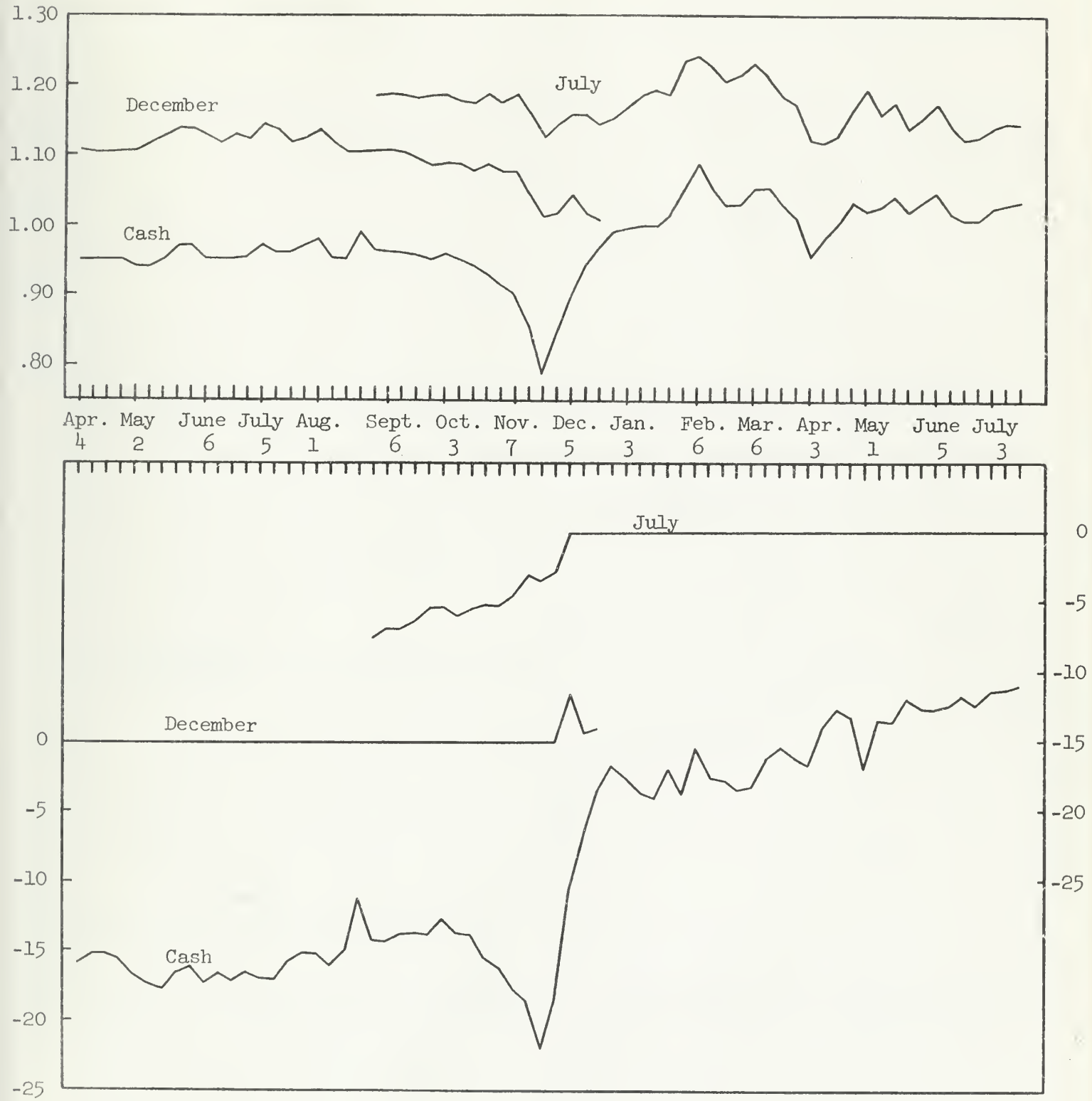
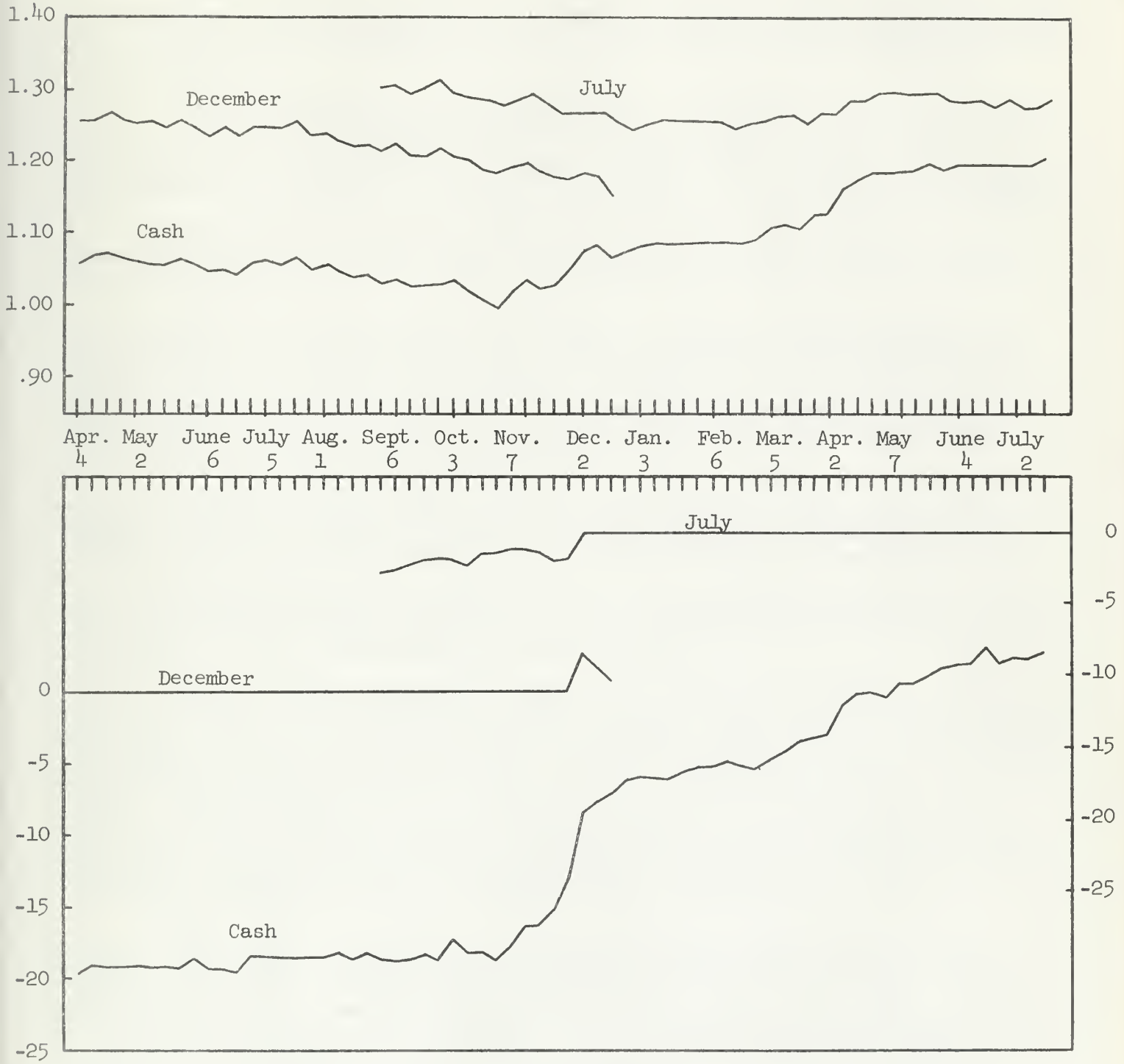


Figure 6g.--Corn: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, December and July Futures and Basis Chart, Average 1955-61



The post-harvest increase was not large enough to be ascribed to anything other than chance.

The first point of interest in the basis charts is their similarity. In broad outline they are all alike; no one of them deviates greatly from the average for the period. The general outline is consistent with the theoretical basis shown in Figure 2.

During the planting and growing season, the basis was fairly stable and did not change in any systematic way. The individual-year variations tended to average out to no change (see the averages in Figure 6g). From harvest to summer, the cash prices increased in relation to the futures in a fairly regular pattern.

The spread between the December and July futures was quite consistent from year to year. Only once (1960) did it deviate more than one cent from the average of 11 cents.

The second major point is that there were substantial individual-year differences. There was about a 10-cent range in the discount of cash from the December future during the harvest period. The smallest basis was about 15 cents and the largest about 25 cents. The average was 19 cents. This harvest basis was the item of greatest year-to-year variation; sometimes it widened and sometimes it narrowed during the harvest period.

A characteristic common to all years and not consistent with our theoretical chart is the rapid narrowing of the basis immediately after the end of harvest. It happened every year and is most clearly seen in the averages.

The relationship of cash corn to July futures at the expiration of trading in July futures varied from year to year. It ranged from a low of 5 1/2 cents to a high of 11 cents. The average was 8 3/8 cents.

Why were there differences between the actual and theoretical charts and differences from year to year in the basis patterns? During the planting and growing season, basis is a speculative matter. Merchants and processors who buy grain before harvest typically hedge in futures markets. As they buy, they are not interested in the actual price of the grain, but in the price in relation to the future. When they think that the cash price is lower in relation to the futures than it will be at harvest, they buy cash and hedge in futures. Thus the preharvest basis is equal to the expected harvest basis. Changes before harvest are the result of speculative error in establishing the early basis.

Basis tends to be widest just at harvest and to narrow quickly after harvest. The amount of storage space available during a particular crop season is essentially fixed. The quantity of grain available to fill the space is greatest at harvest and decreases gradually as the crop is used. The basis represents the going market price for storage space. It is a supply-demand determined price. In our theoretical basis chart, we made basis a matter of cost of storing grain. But space is not always paid cost. If the demand for use of space is great in relation to the amount available, the price (basis) may exceed cost. If, on the other hand, the demand for the use of space is small in relation to the amount available, the price may be less than cost. Storers will accept less than full cost rather than let space remain empty. Half a loaf is better than none.

If harvest time marketings are smaller than anticipated, the basis narrows as harvest approaches and is relatively narrow at harvest. The fall of 1959 is a good case in point. Farmers were able to hold a high proportion of the crop on farms and simply refused to sell liberally at the prevailing 95 cents a bushel. The existing commercial storage space was not in vigorous demand, and its price was less than had been anticipated early in the season and lower than usual. It is interesting to note that the price level of corn, as shown by the July futures, did not go up. Holding at harvest resulted in a liberal supply later in the marketing season.

An opposite pattern occurred in 1960. The preharvest basis was relatively narrow. The crop turned out to be larger than had been anticipated and was unusually high in moisture. The market was glutted, the price declined, and the price of storage increased sharply (basis widened).

The difference between the December and July futures is the price of storage of corn at Chicago for the period from December to July. This tends to be widest at the end of harvest or the first of December. As we noted, there is a tendency for the storage price to be about 11 cents at the end of November. A notable exception occurred in 1960, when the difference, or spread, was 15 cents. It was unusually wide for the same reasons that the December basis was wide.

The end-of-season basis is of special interest. The east-central Illinois farm price averaged 9 cents a bushel in July during the six-year period. Individual years were approximately as follows:

1956	5¢ under	1958	10¢ under	1960	8¢ under
1957	9¢ under	1959	7¢ under	1961	11¢ under

This ending basis is fairly stable. It is a function of the relative supply of and demand for corn at Chicago and in downstate Illinois. As stocks at Chicago are large, the basis tends to be narrow; and as stocks at Chicago are small, the basis tends to be wide. If stocks of corn at Chicago are quite small, it becomes necessary to pull corn to Chicago from downstate, widening the basis to the full cost of freight.

Soybean basis. The soybean charts (Figure 7) are similar to the corn charts. The actual prices were erratic, showing no central tendencies toward regular behavior. On the average, the November soybeans showed little variation. Individual-year variation was substantial. The average of the July futures showed a substantial increase, amounting to about 50 cents a bushel. But if we look at the individual years we find that the predominant trend was downward in three years, up moderately in one year, and up strongly in two years. A long position in July soybeans would have made money half of the time and lost money half of the time. However, the profits would have averaged much more than the losses.

The failure of the futures to average out to zero, as it theoretically should, can be ascribed in two causes: First, the period was too short for the averages to be meaningful. Such a short period should not be used as a basis for judging long-run tendencies. Second, the market has not yet come to appreciate the impact of a short supply of soybeans. It takes a large price increase to get the necessary adjustments in use when soybean supplies are reduced moderately.

Figure 7a.--Soybeans: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, November and July Futures and Basis Chart, 1955-56

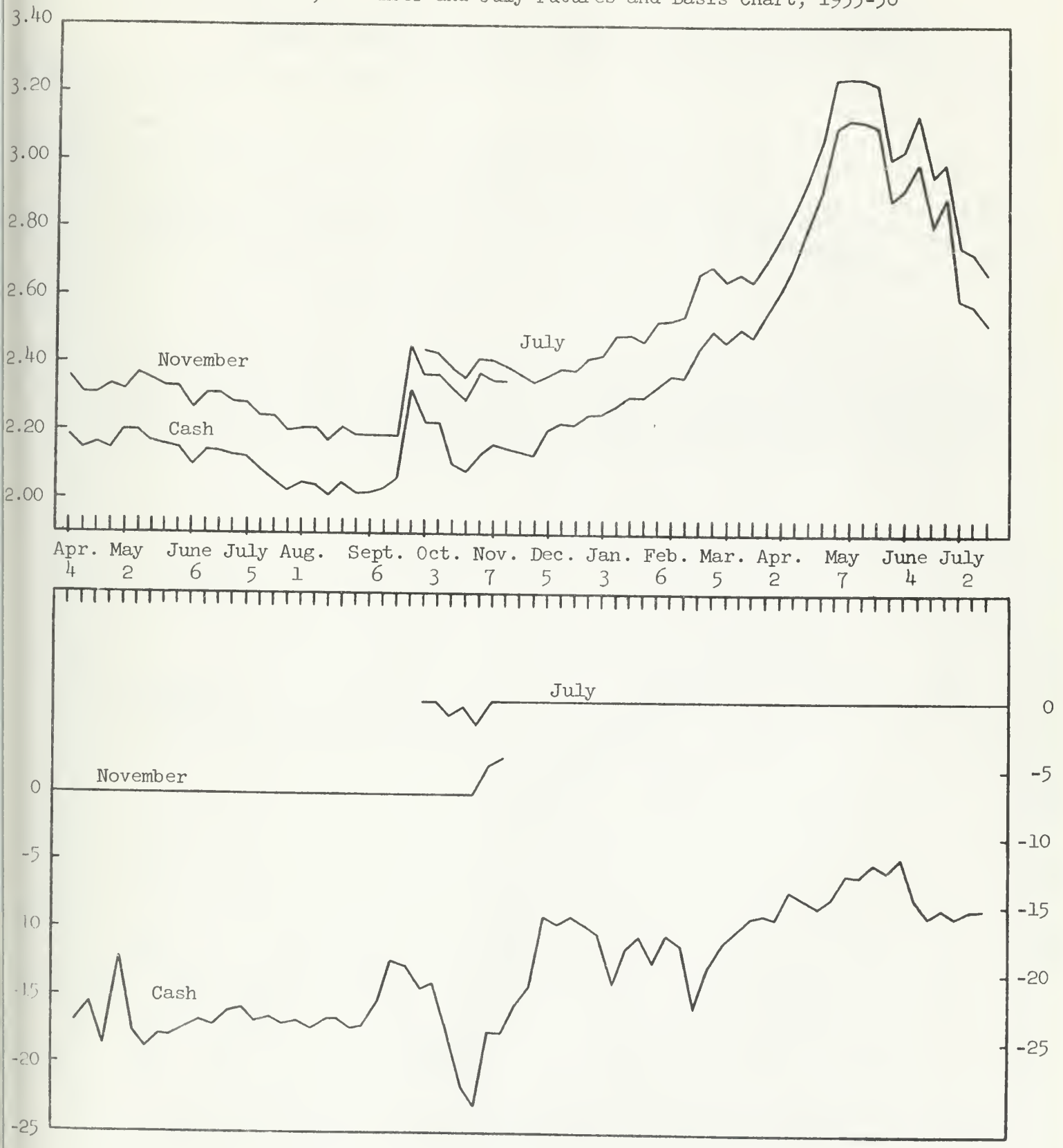


Figure 7b.--Soybeans: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, November and July Futures and Basis Chart, 1956-57

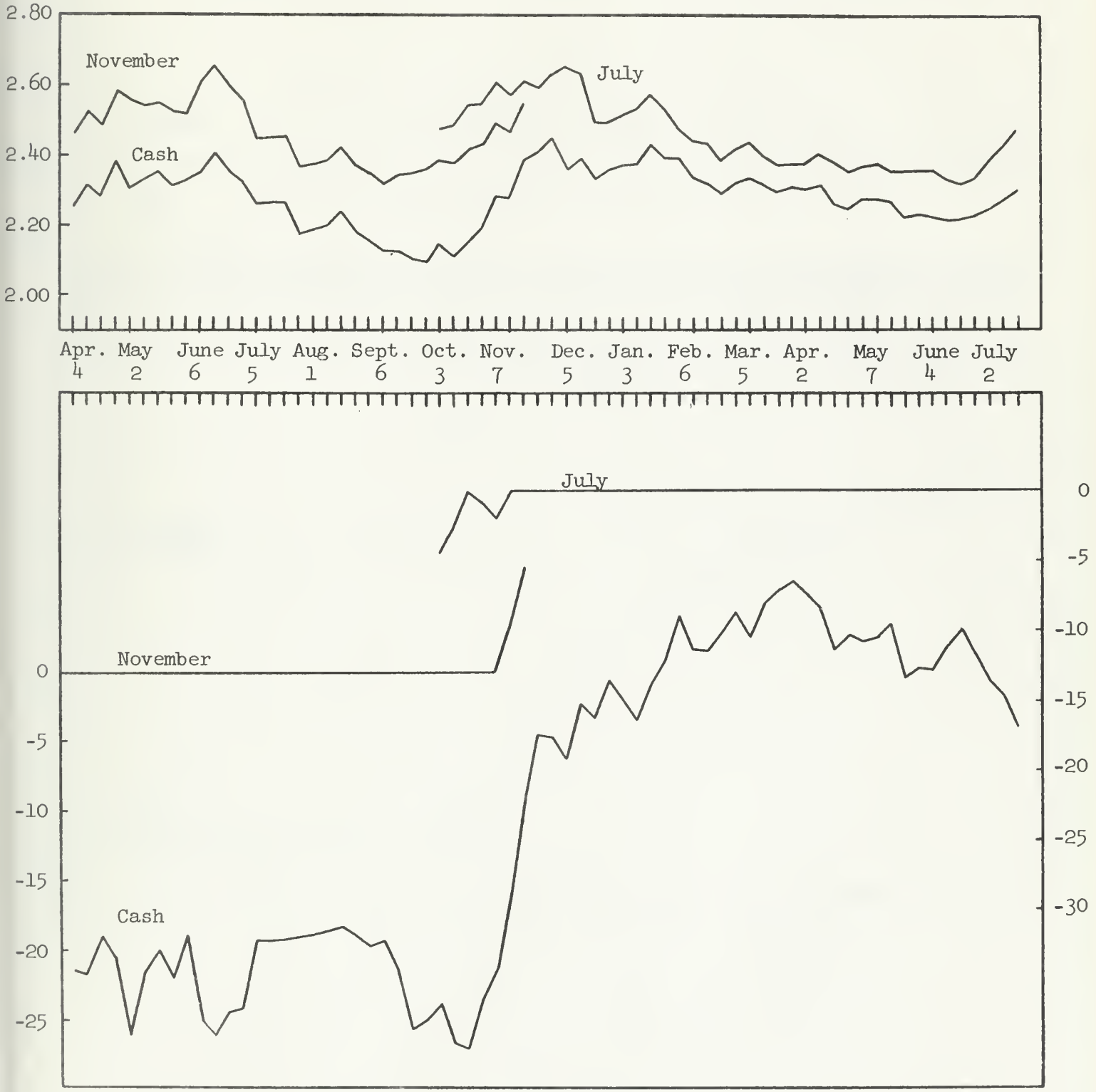


Figure 7c.--Soybeans: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, November and July Futures and Basis Chart, 1957-58

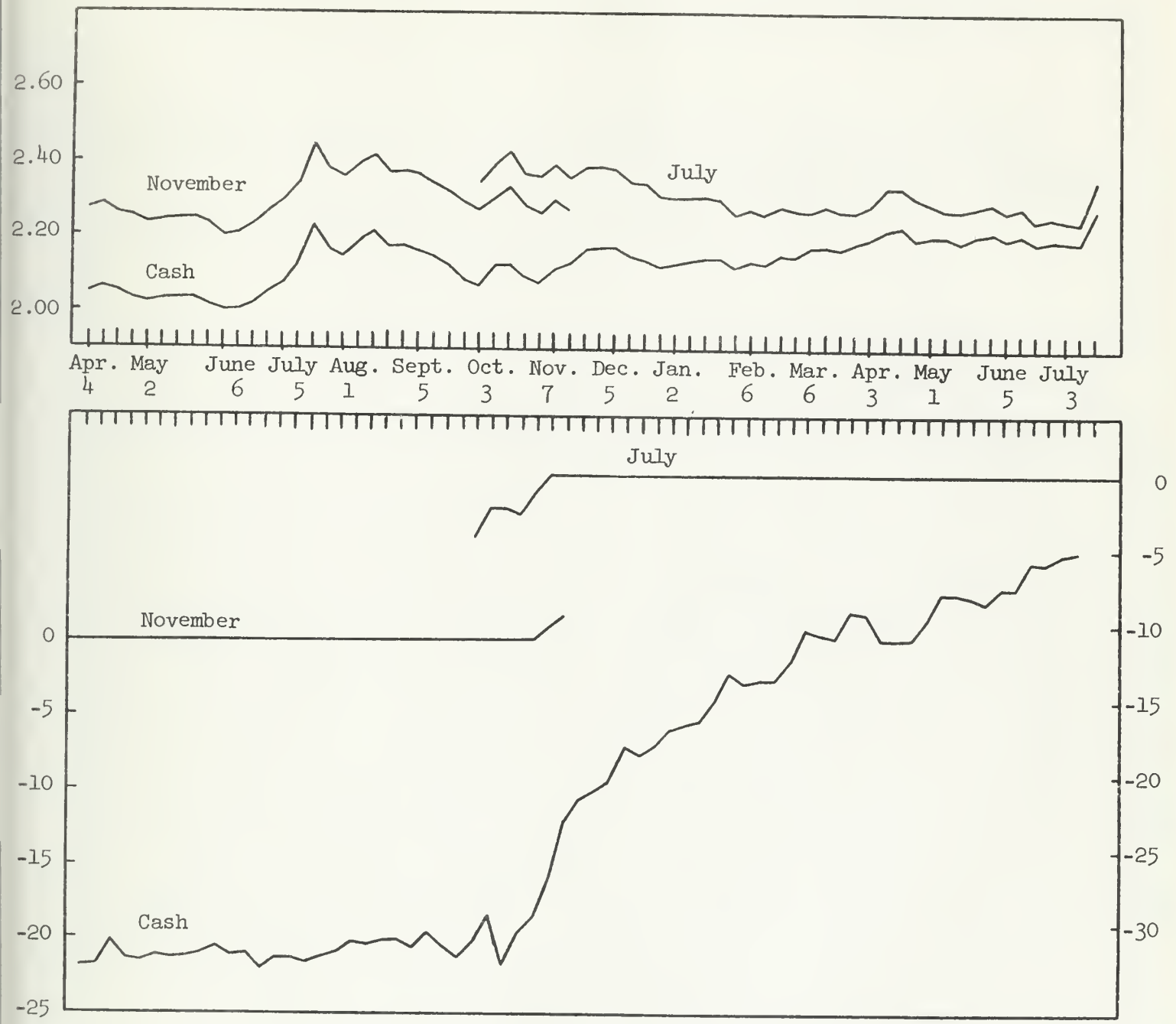


Figure 7d.--Soybeans: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, November and July Futures and Basis Chart, 1958-59

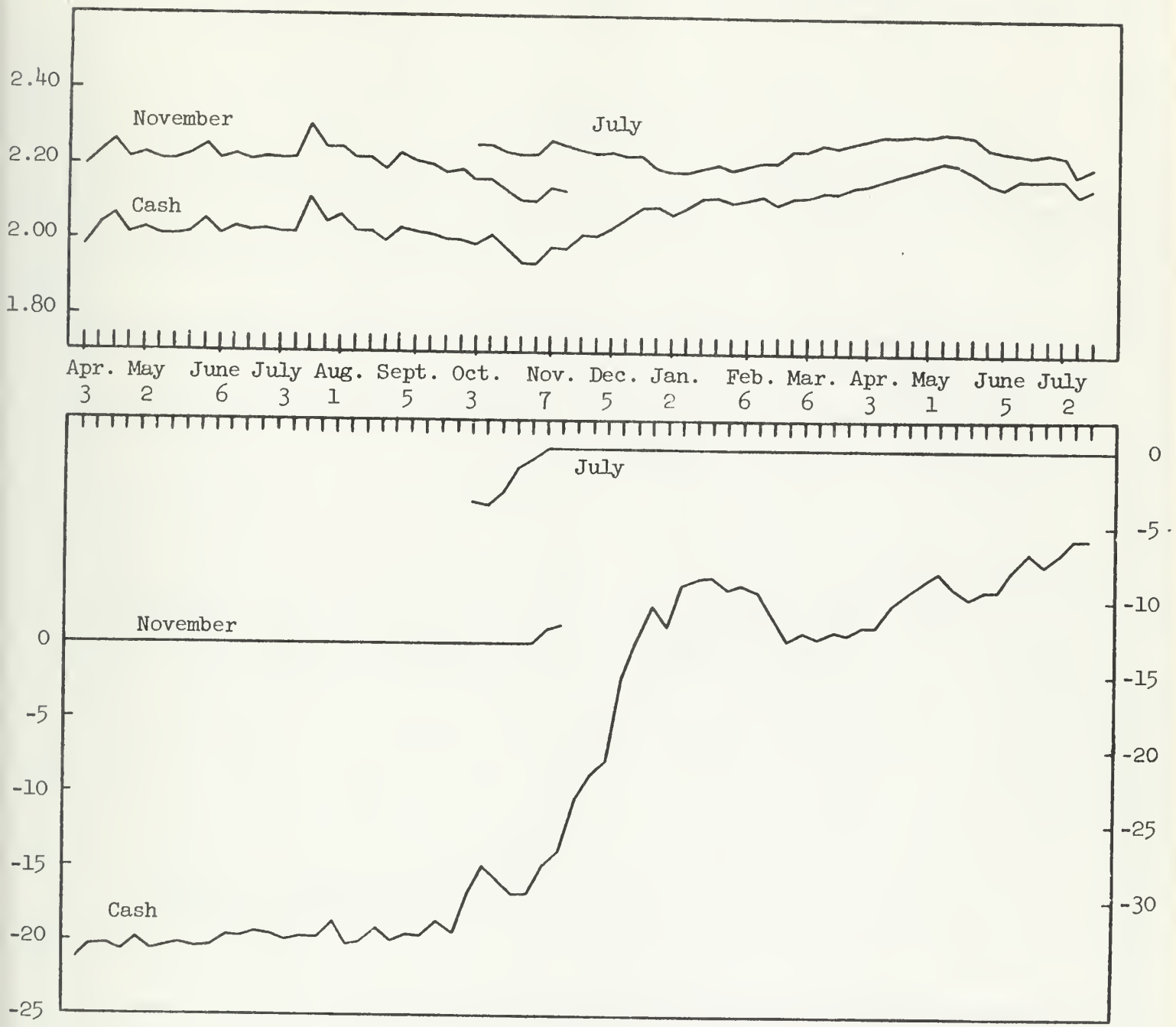


Figure 7c.--Soybeans: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, November and July Futures and Basis Chart, 1959-60

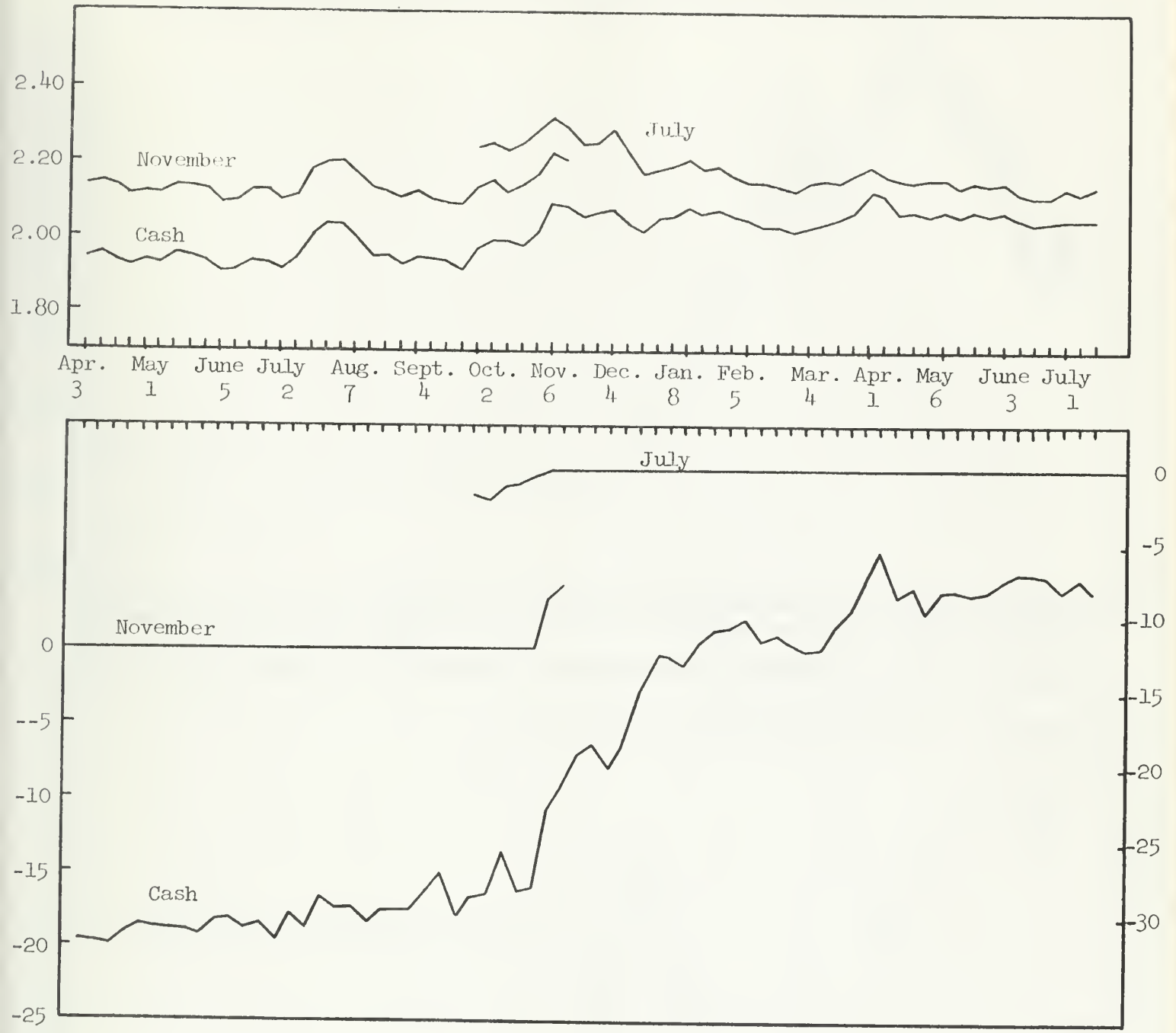


Figure 7f.--Soybeans: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, November and July Futures and Basis Chart, 1960-61

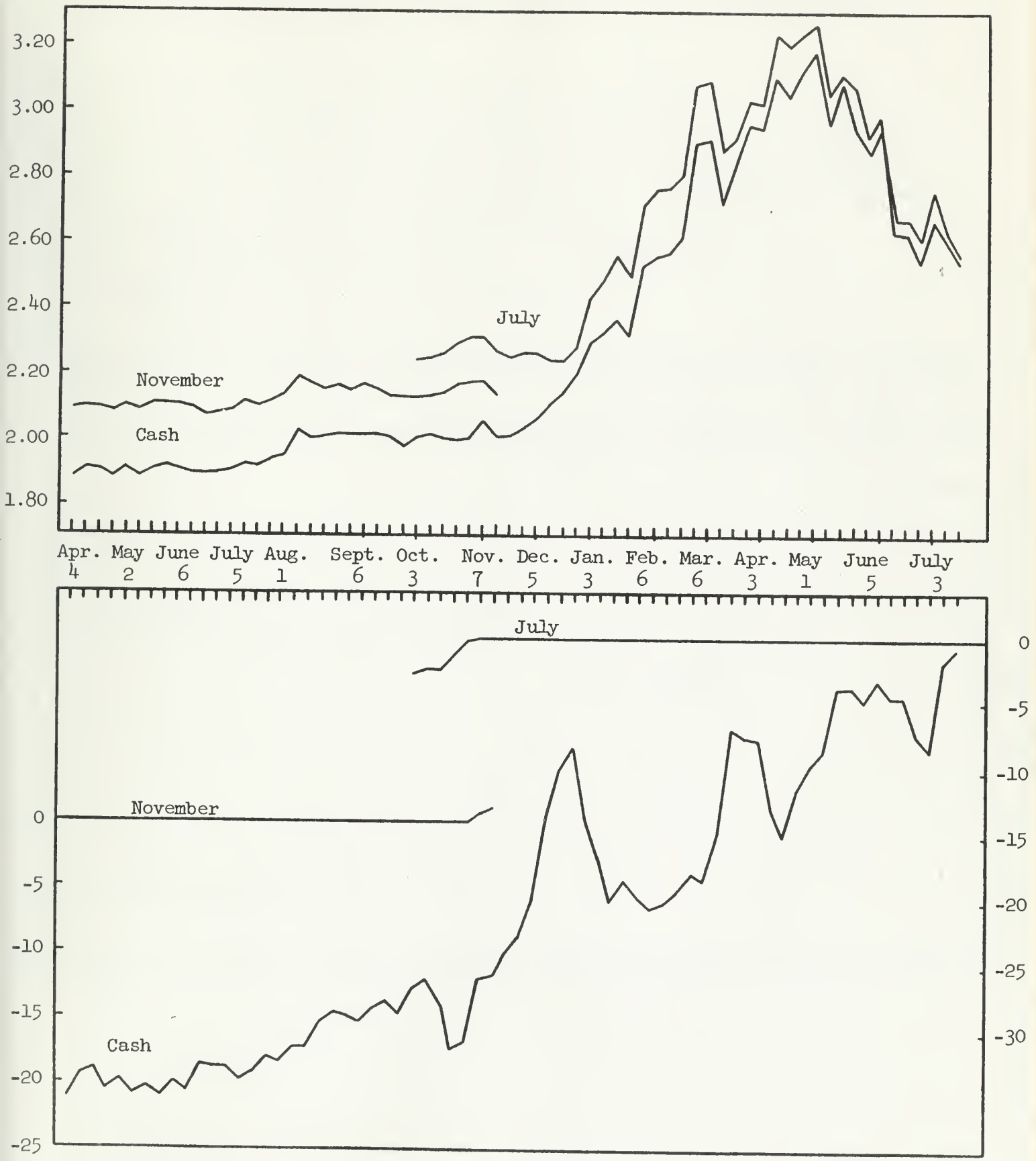
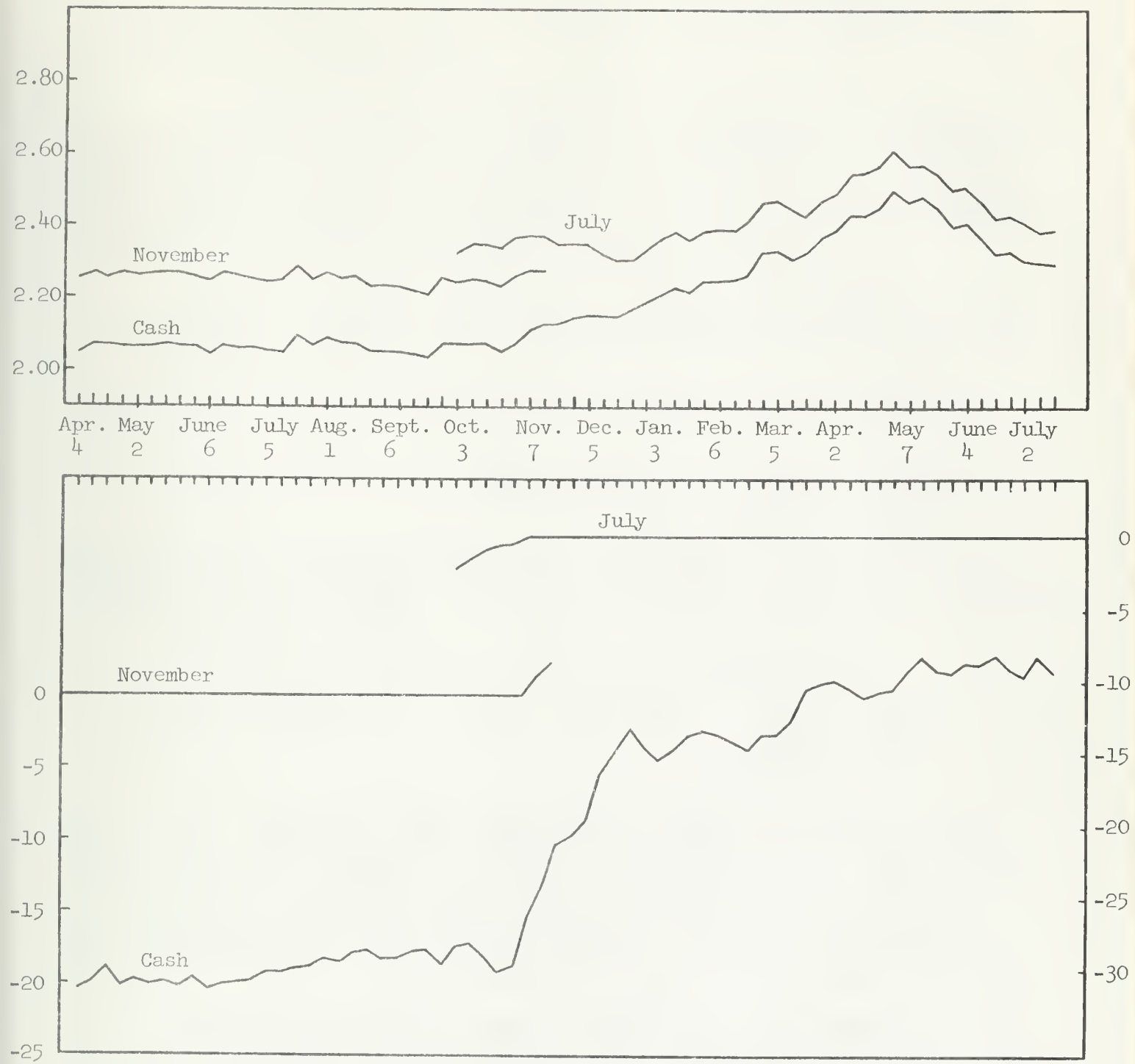


Figure 7g.--Soybeans: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, November and July Futures and Basis Chart, Average 1955-61



In broad outline, the basis charts are much like those for corn, but they vary considerably in detail in individual years. The same general forces were at work in all of the years, but these forces varied in intensity and hence in their impact on basis patterns.

The preharvest basis tended to be about the same from year to year, with no major variations in most years. There were sharp increases in the discount of cash from futures at harvest in 1956 and 1957. In 1960 the basis narrowed as farmers were slow to sell at less than $2. The market as a whole was not aware of the impending shortage, and the futures did not move up. The slow selling by farmers reduced the need for off-farm storage. Accordingly there was a reduction in the going market price for storage (narrowing of the basis).

There was the same tendency for a quick rise in the cash price relative to the futures as we noted in corn. This again underscores the fact that basis is a competitive market price.

The differences between the November and July futures at the end of October were:

1955	5 1/4	1957	9 3/4	1959	11 1/2
1956	11	1958	12 1/4	1960	13 3/4
				Average	10 1/2

Because 1955 was substantially smaller than the others, we should judge that the average of 10 1/2 understates the real central tendency. Twelve cents is probably a more representative number.

The cash in relation to the July futures during July was:

1956	15 3/8 under	1958	6 1/8 under	1960	8 under
1957	15 under	1959	6 under	1961	4 under
				Average	9 under

The first two were much larger than the last four. There were two reasons for this difference: First, during the early part of the period, stocks were not built up at Chicago. Accordingly, it was necessary to attract soybeans from a considerable distance from Chicago to satisfy local needs. Thus the country price had to discount the Chicago price by freight to Chicago. In recent years large stocks have been regularly accumulated at Chicago during harvest. This has tended to hold the country price high in relation to Chicago during the latter part of the year. Such accumulation is likely to take place in the future.

Second, during the early part of the period it was standard practice to trade number two yellow soybeans as the standard grade, but in recent years the trading has been based on number one yellow. The Chicago futures contract is for number two yellow. The result of this change has been to increase the country price relative to Chicago. If the Chicago futures contract were changed to a number one, this gain would be lost.

On balance we are disposed to regard seven cents as a representative discount of the country price under the July futures during July.

One further point of interest in the soybean charts is the erratic post-harvest basis pattern in 1960 to 1961. The basis behaved nicely until January, when it widened. It widened again in April and in June. The first big, rapid rise in the soybean price came in January. The country price failed to follow the futures up. Farmers did not believe that soybean prices would go up so much and therefore sold large quantities. Processors did not believe it either and failed to follow the futures up with their bids. The April basis reaction occurred during the final upsurge of soybean prices. The reasons were similar. The basis widening during June was part of the downward race in price. Under the rules of the exchange, futures prices can fall only 10 cents a day. There is no limit on the possible decline in cash prices.

The appropriate conclusion is that basis tends to be erratic in years when price changes are large and rapid but finally follows its usual pattern.

Oats basis. The prices of oats were erratic. The average variations in futures tended toward zero. The only discernible repetitive pattern was a decline from January to March.

The basis patterns were similar in broad outline in each of the years; yet there were significant year-to-year differences. The first outstanding point was the tendency for the basis to narrow moderately from January to harvest. The six years from 1955 to 1961 were a period of generally declining oat production. Usually oat plantings and production turned out to be smaller each year than in the preceding year. This accounts for the tendency to consistently overestimate the basis that would prevail during harvest.

There was a sharp basis gain immediately after harvest, but it was usually followed by a widening of the basis. Careful examination also shows a tendency for the price to decline at the same time. This latter tendency is not consistent with theoretical basis behavior. The most reasonable explanation lies in the competition between oats and soybeans for storage space on farms. It appears that oats were put away during harvest and moved to market a short time later to make room for soybeans. This put pressure on cash prices and tended to widen the basis.

The differences between July and March futures at the end of June were as follows:

1955	4	1957	5 1/8	1959	5 3/8
1956	6 3/8	1958	6	1960	5 1/2
				Average	5 3/8

The consistency of these spreads gives us considerable confidence in applying them to future years as a basis for market actions.

The maximum basis gain was usually experienced by the first of the year following harvest. In every year there was a tendency for the basis to widen after January. This widening was consistent with the tendency for the price of oats to decline during the spring. These two things tell us that there was a negative market price for storing oats at country points from January on. This

Figure 8a.--Oats: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1955-56

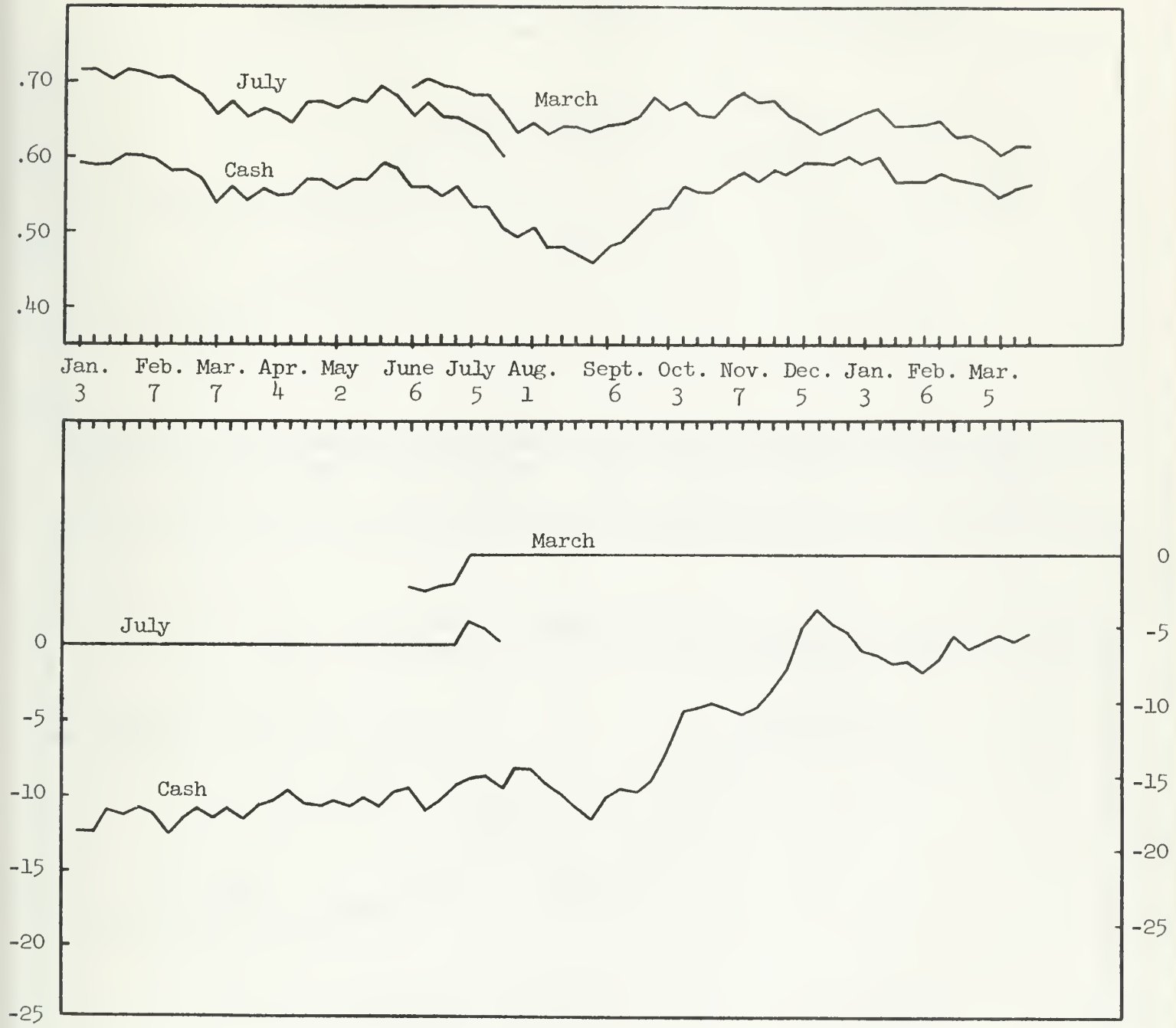


Figure 8b.--Oats: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1956-57

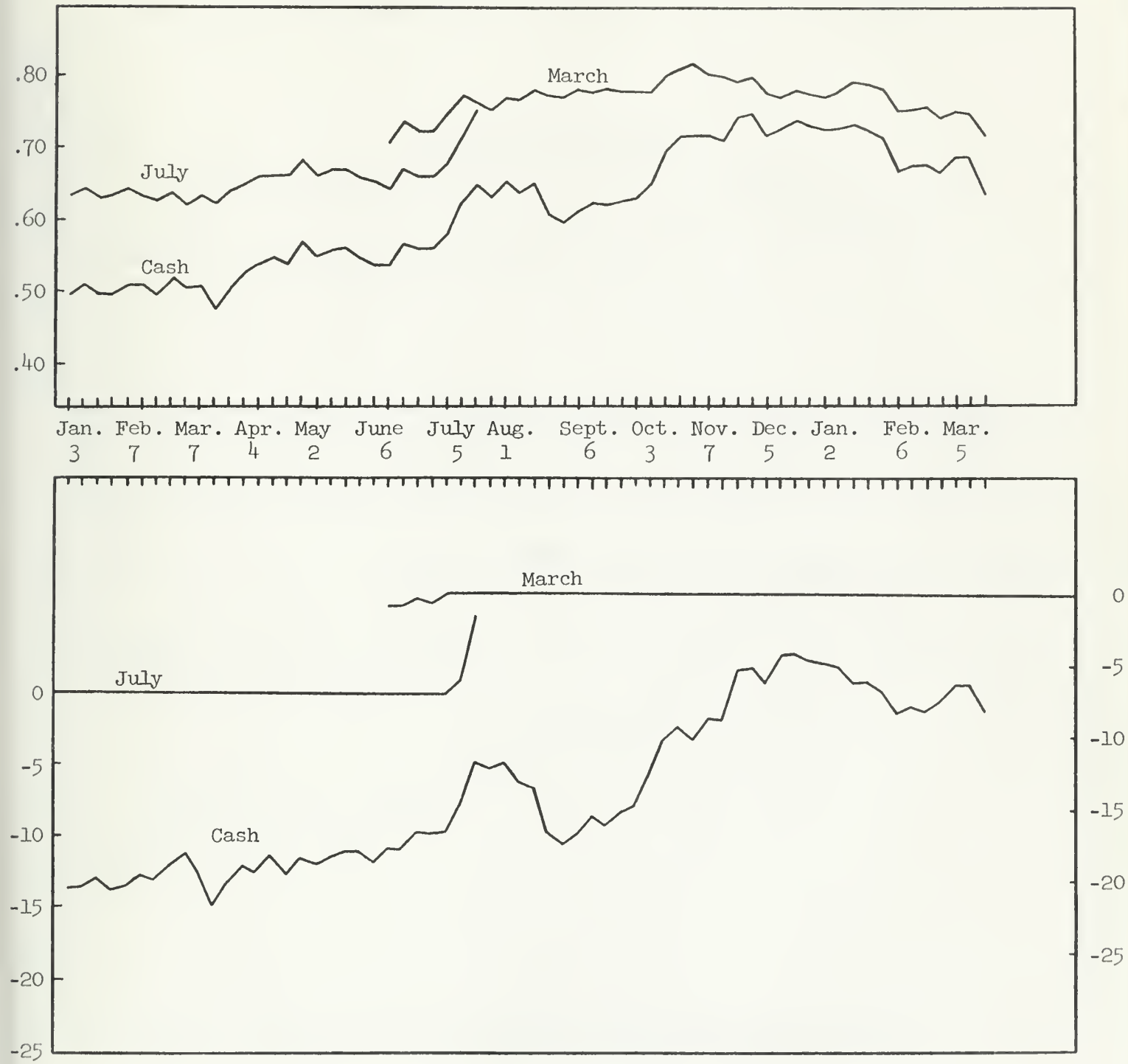


Figure 8c.--Oats: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1957-58

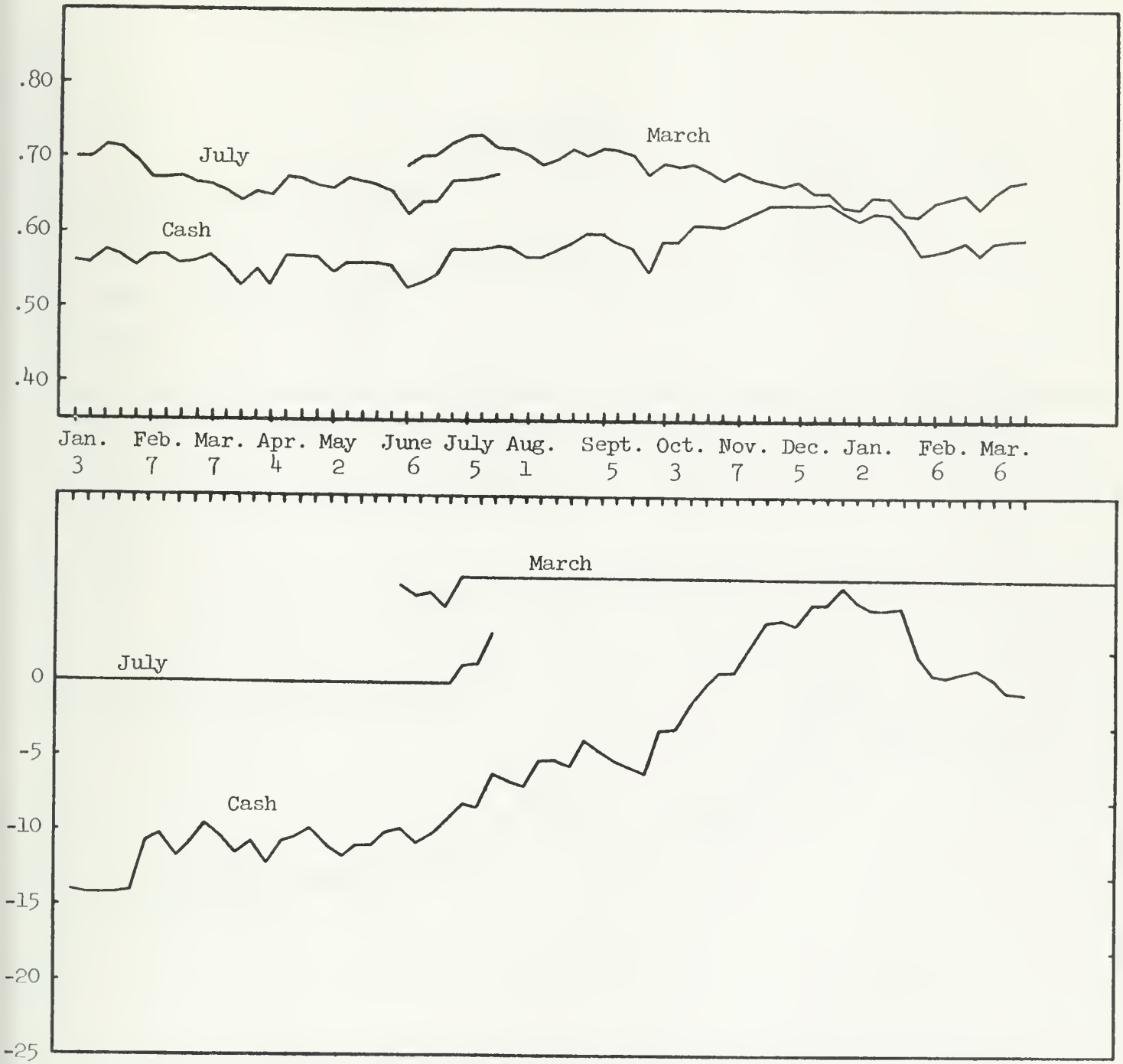


Figure 8d.--Oats: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1958-59

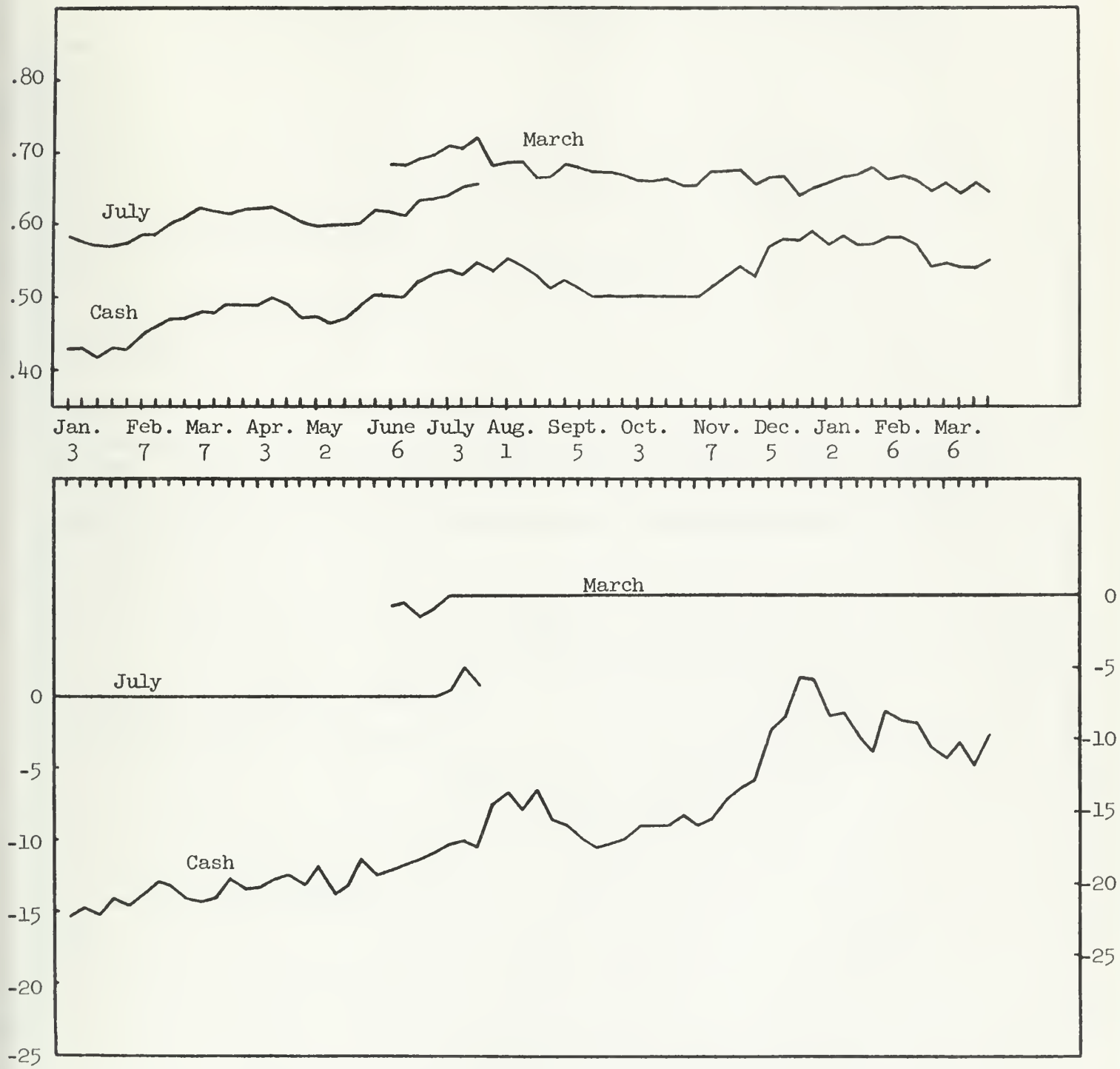


Figure 8e.--Oats: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1959-60

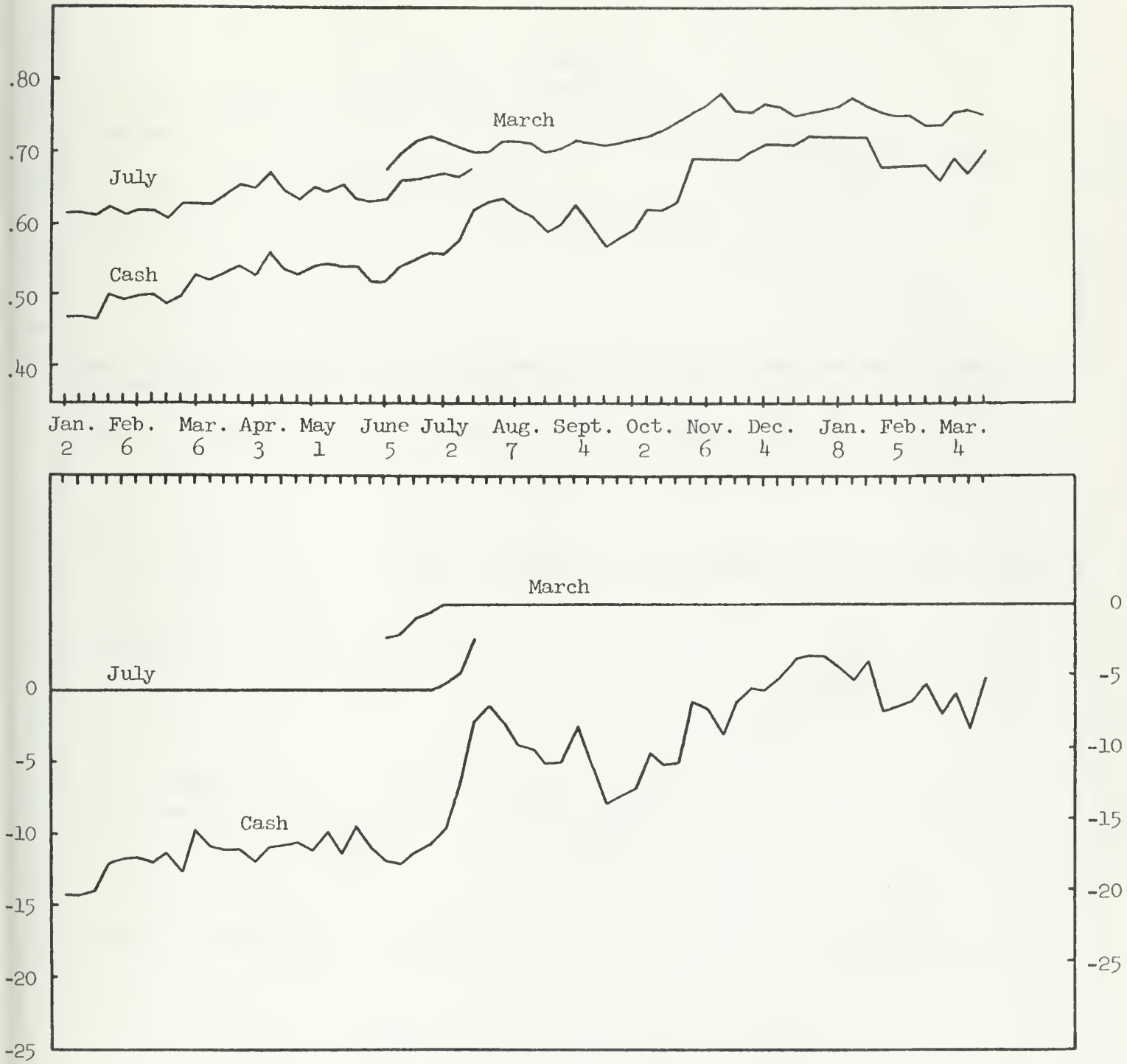


Figure 8f.--Oats: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1960-61

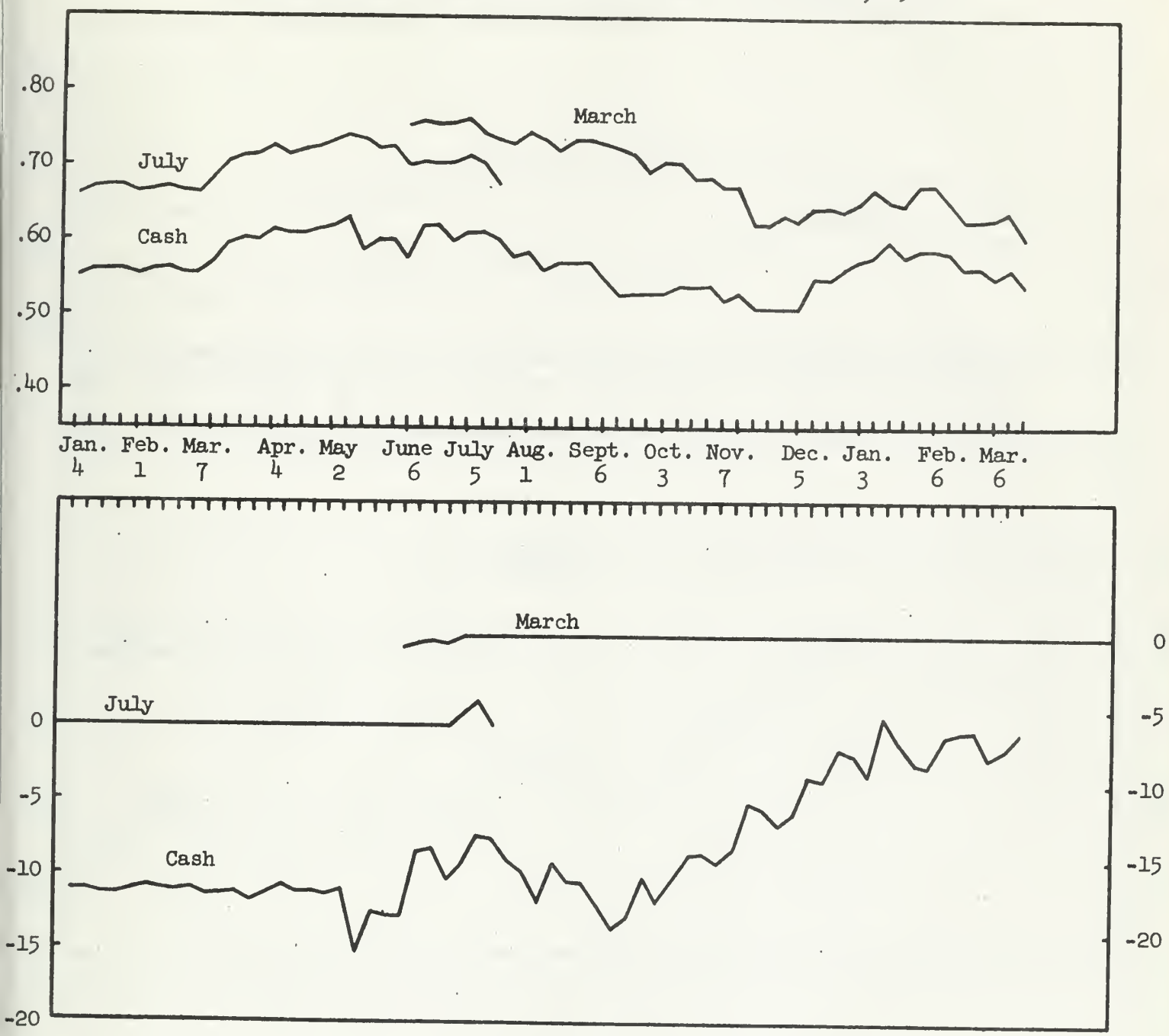
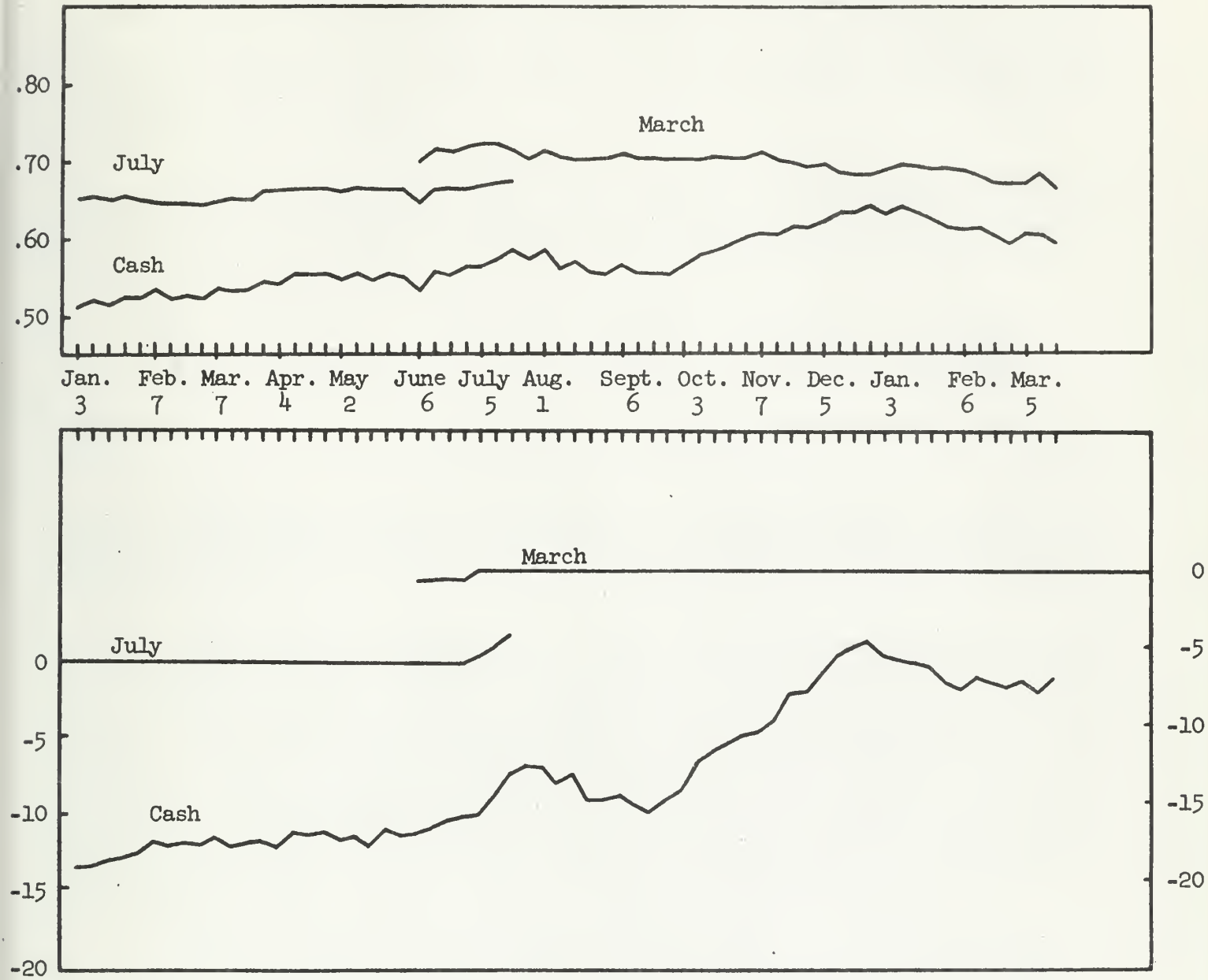


Figure 8g.--Oats: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, Average 1955-61



is not unreasonable. Oats are used almost entirely for feed. Farmers hold amounts that they anticipate will be needed for feed and seed plus a reserve. It is the movement of this reserve to market that puts pressure on the cash price and the basis. Holding a reserve is equivalent to accepting a negative return for storage. Farmers are willing to pay a small amount to be sure that they have enough. This is not a conscious decision. It is interesting to note how thorough the market is in putting a price on things.

The fact that the narrowest basis occurs in early January makes this the pertinent time to measure basis rather than at the end of the storage season, as we did for corn and soybeans. It does not pay to hold oats past January except for reasons other than price. On the first day of January for which data were collected, the bases were:

1956	6 1/2 under	1958	1 5/8 under	1960	4 1/8 under
1957	4 3/4 under	1959	8 1/2 under	1961	9 1/4 under
				Average	5 1/2 under

This range is substantial. Accordingly, the average should be used with reservation.

Wheat basis. The price of wheat does not show any regular seasonal pattern. The average for the six years shows a seasonal increase. The first reason is the familiar one that the period is too short for the averaging principle to work effectively.

There is also a second reason. The price of wheat was regularly dominated by government price programs. The wheat program works. The result tends to be a built-in seasonal increase. It was always clear that the rise in the price of wheat would be limited by government resale at a price moderately above the loan. With the knowledge that the price would never go appreciably above the loan, the ownership of wheat held no attraction except as the price went below the loan equivalent for futures and below the loan minus storage changes for cash wheat. Once the price got below the loan, buying and holding was encouraged. As a sufficient amount moved into the loan, the price was forced up to a level enough above the loan to enable farmers to redeem and sell wheat. This below- to above-the-loan tendency forced a somewhat regular seasonal variation.

Basis patterns were more erratic for wheat than for the other grains. The reason was that wheat is less closely related to Chicago than are the others. Wheat is grown in the southern half of the state and is thus a greater physical distance from Chicago.

There are three principal outlets for Illinois wheat: several mills in Illinois, St. Louis, and New Orleans. Chicago is a minor destination. About the only time wheat moves to Chicago is when it overflows existing storage space outside of Chicago or Chicago supplies are not large enough for local milling needs in the spring.

There are other reasons why Chicago and downstate Illinois prices are relatively independent, but it is sufficient for our purposes to point out that they are fairly independent of each other.

Figure 9a.--Wheat: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1955-56

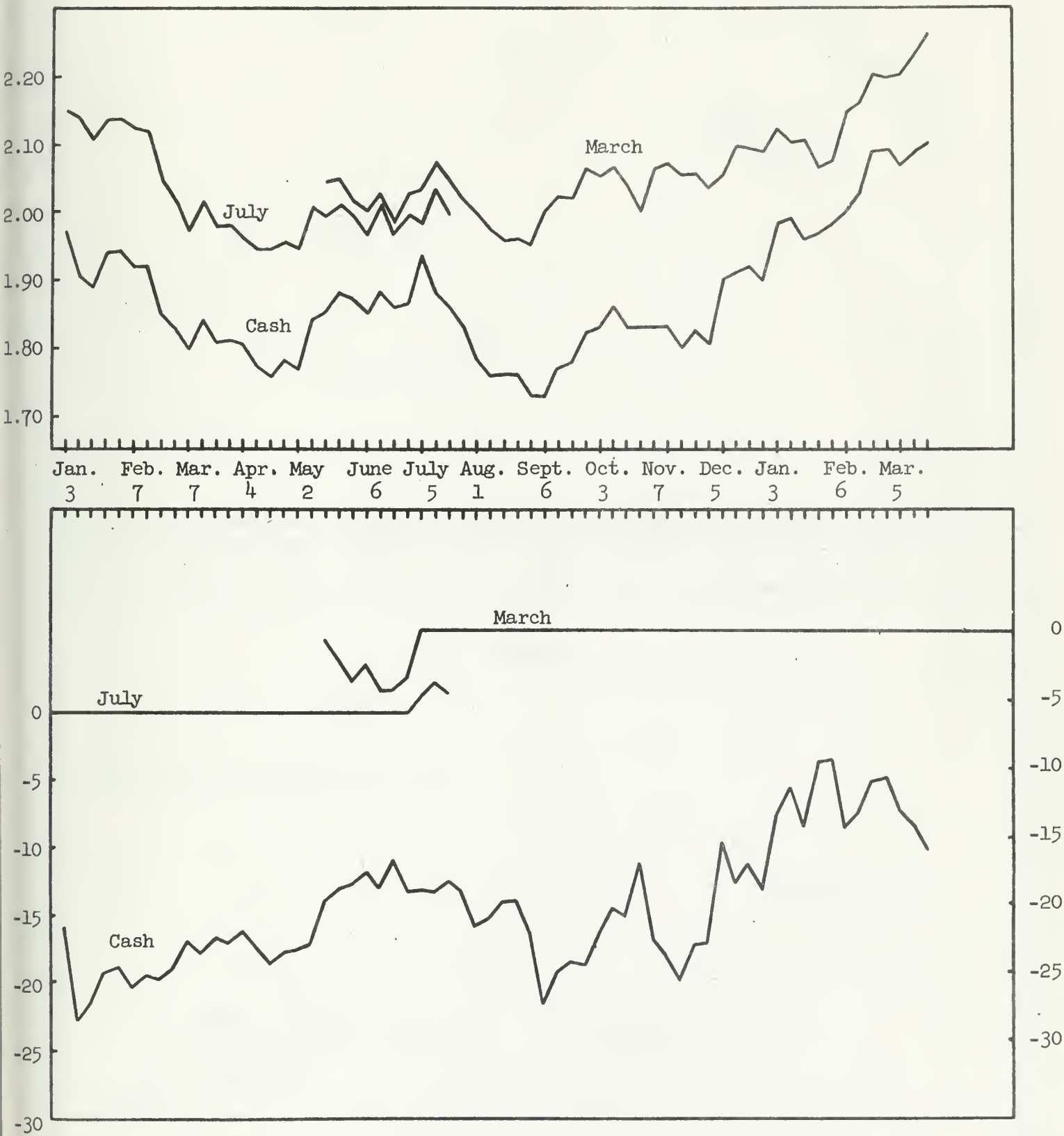


Figure 9b.--Wheat: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1956-57

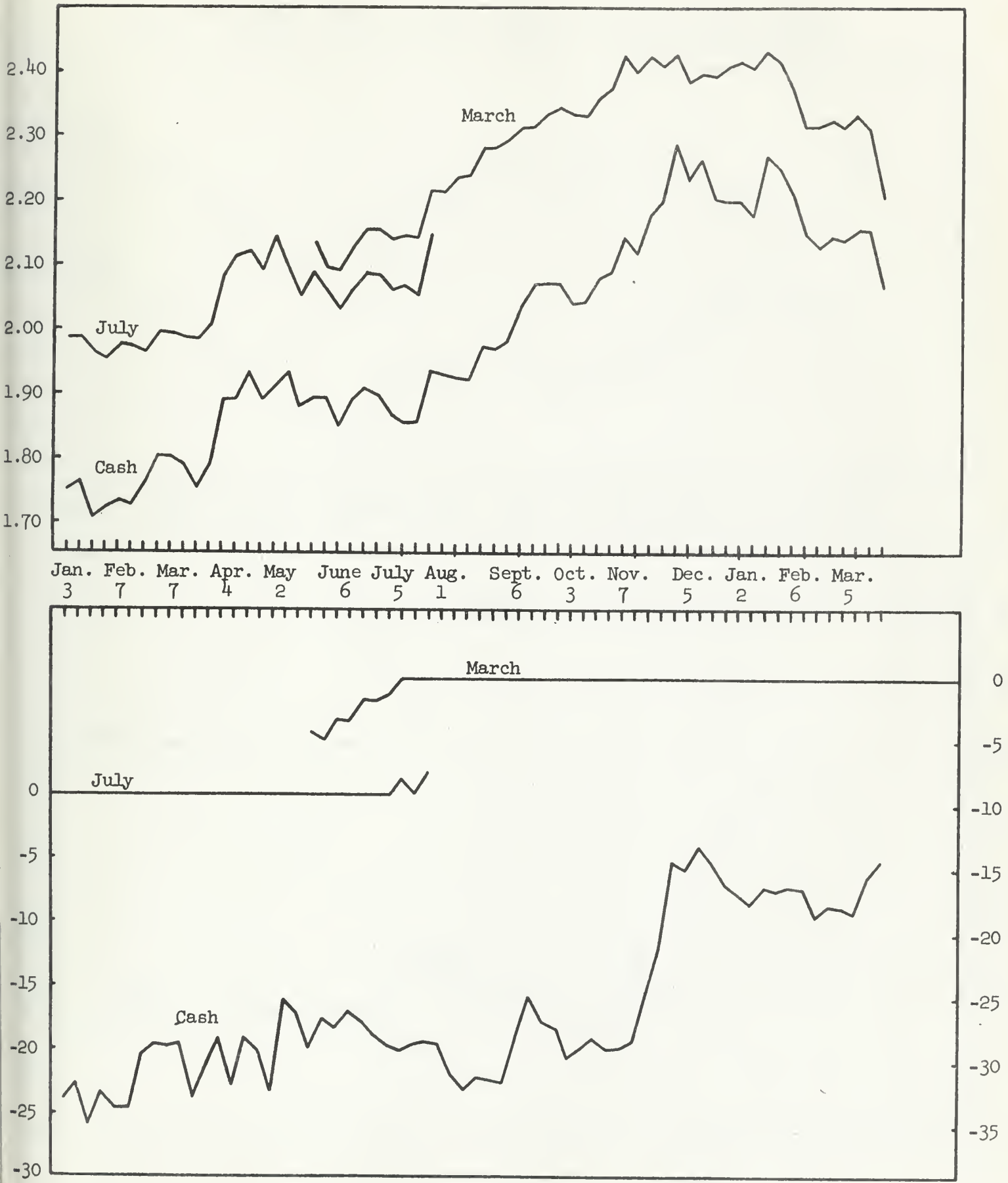


Figure 9c.--Wheat: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1957-58

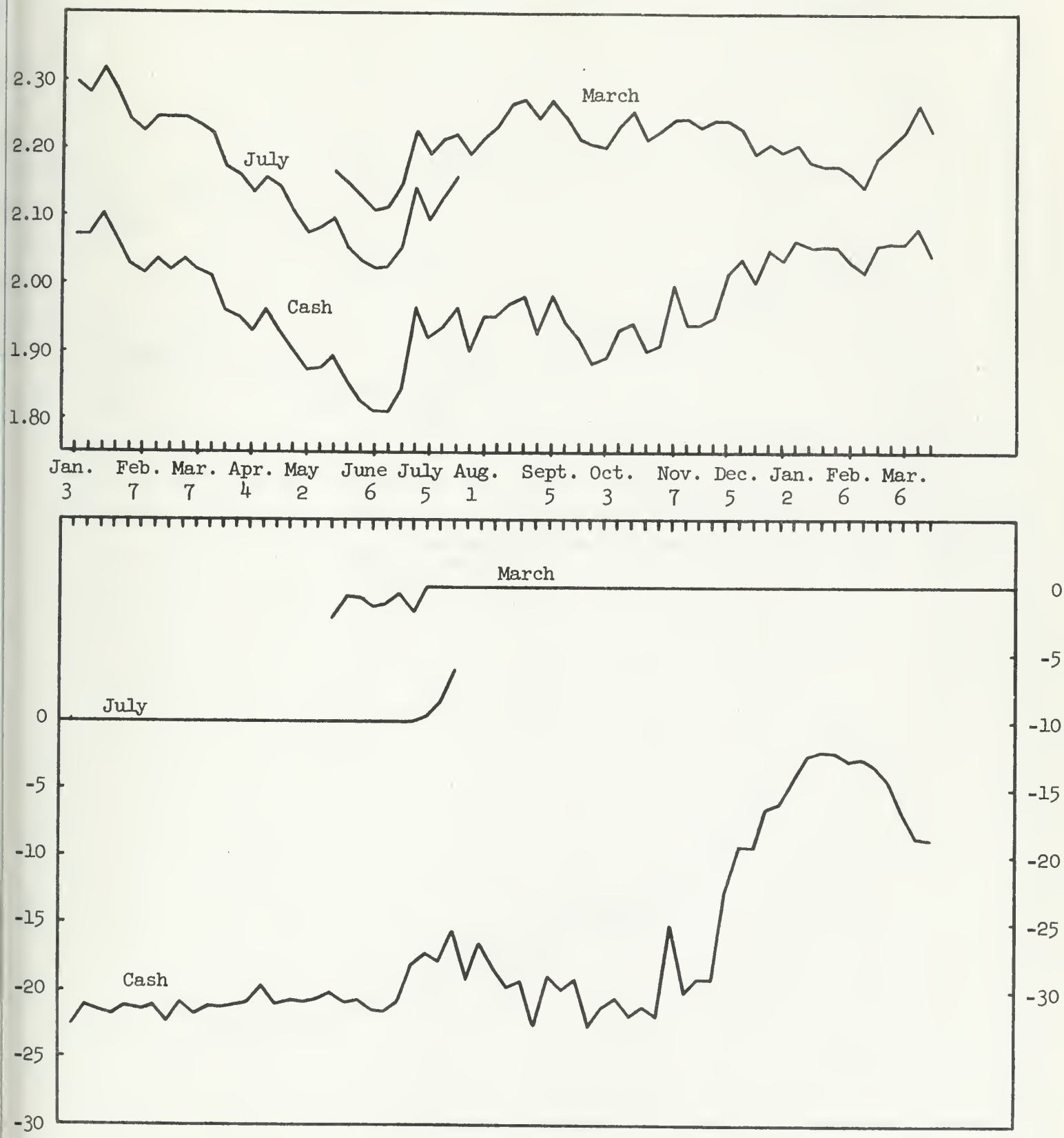


Figure 9d.--Wheat: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1958-59

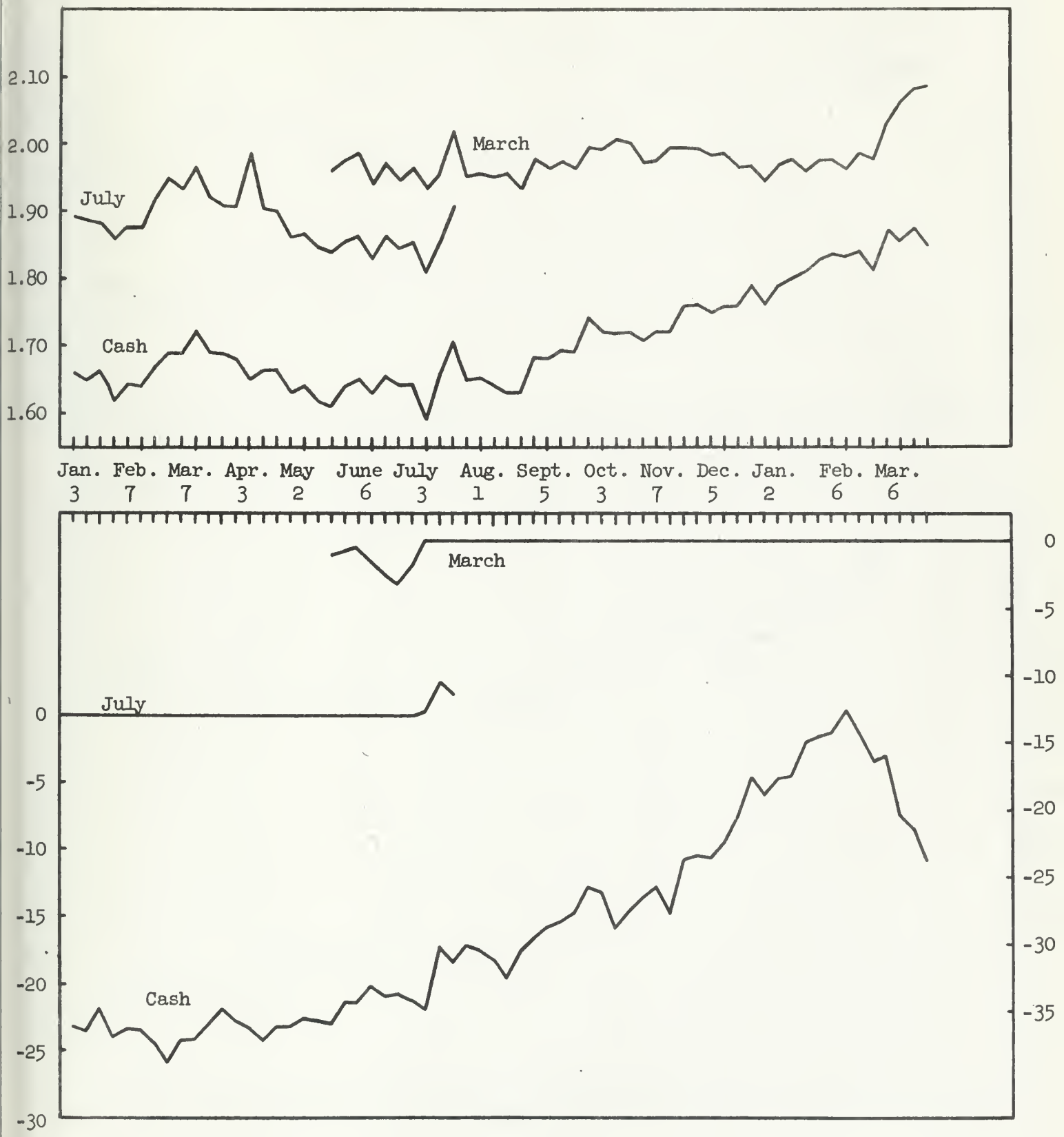


Figure 9e.--Wheat: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1959-60

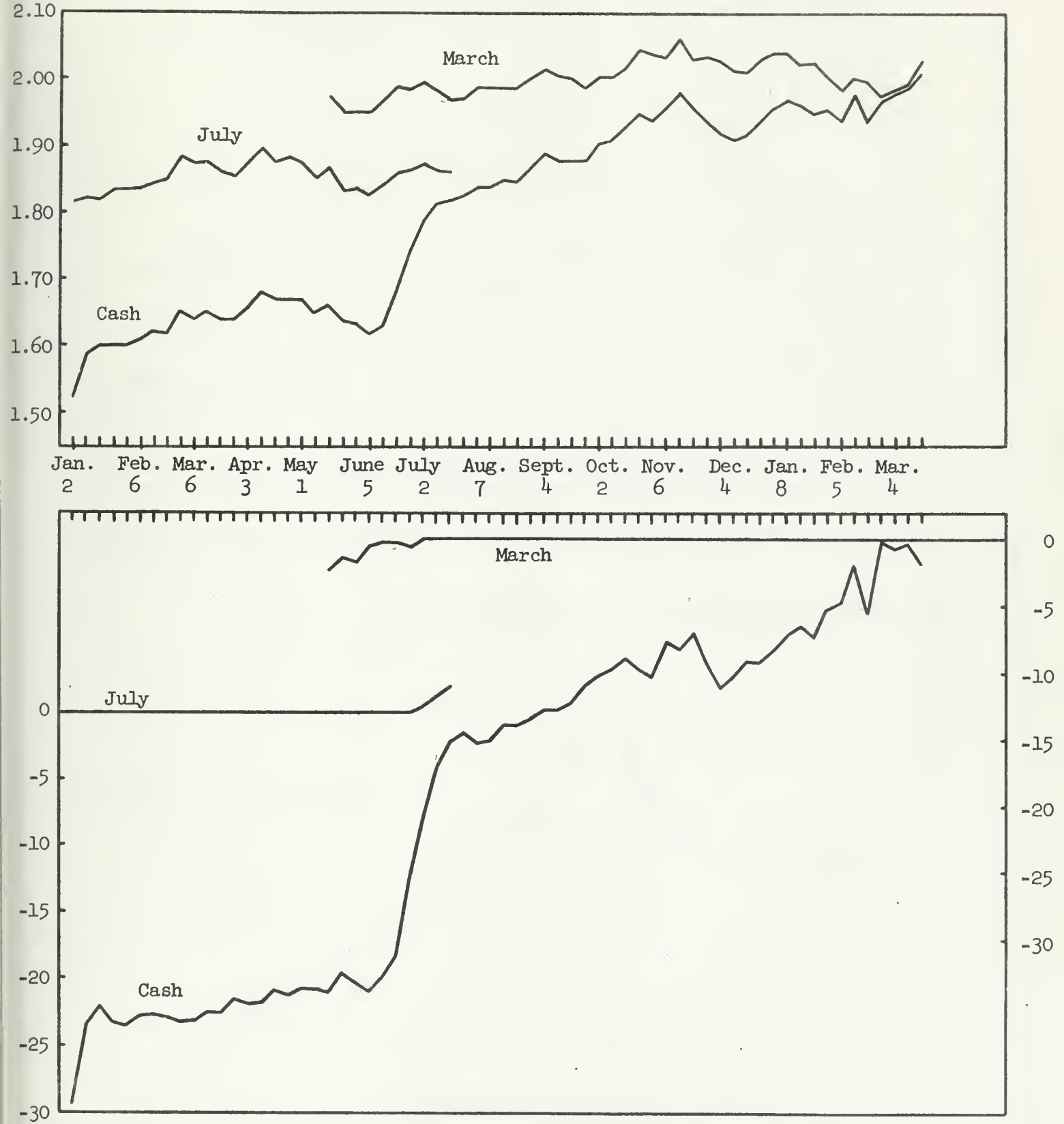


Figure 9f.--Wheat: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, 1960-61

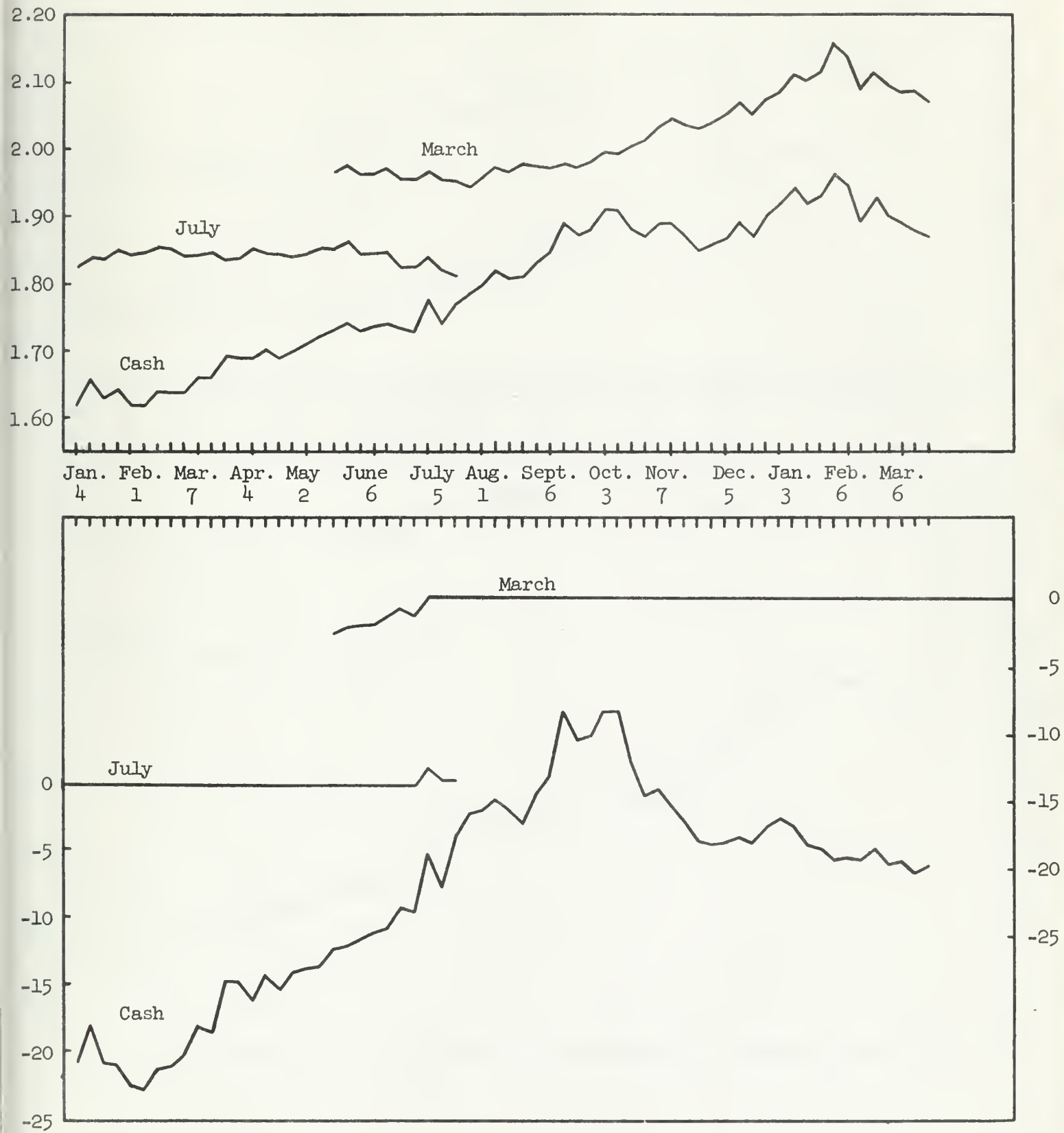
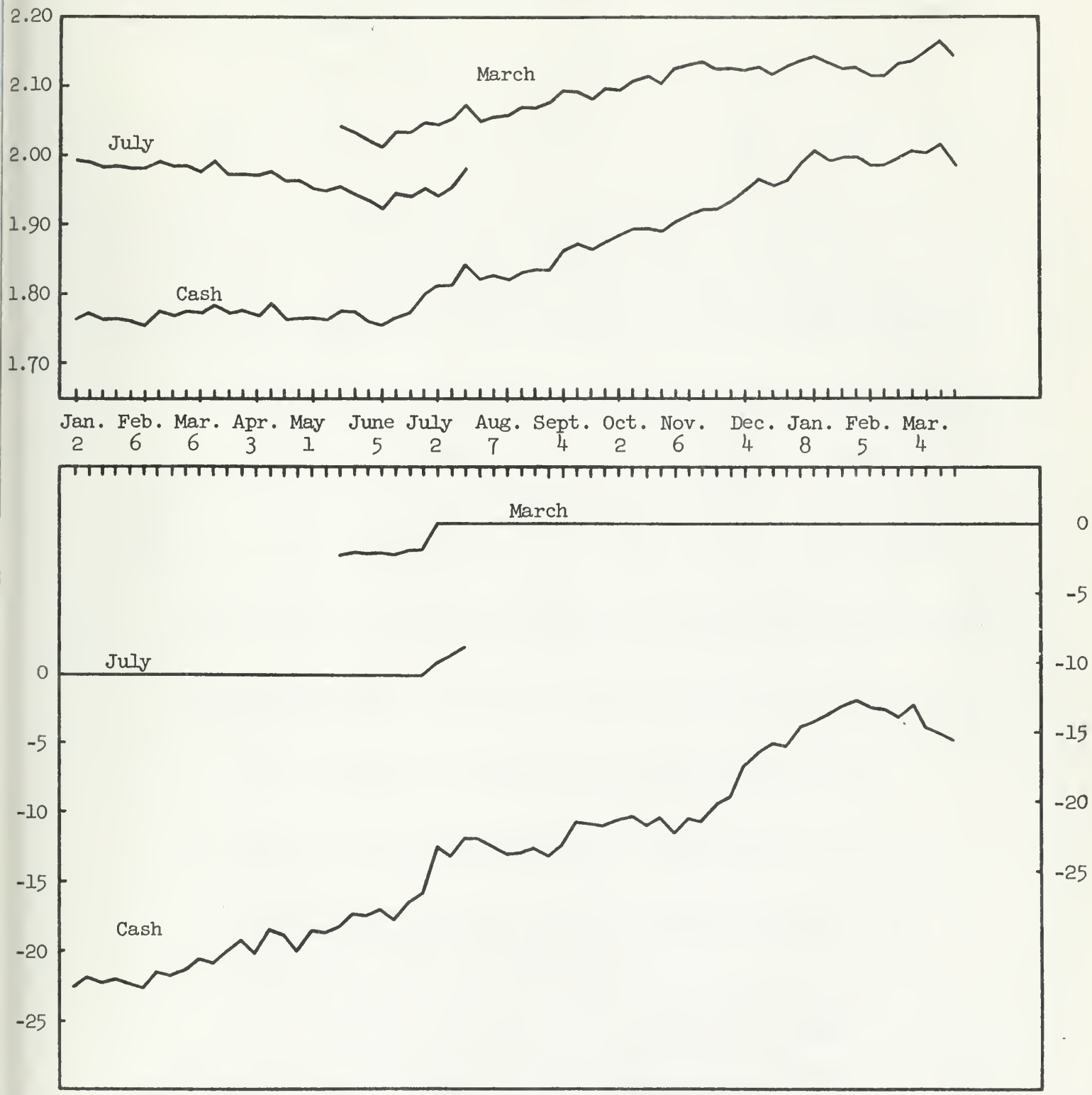


Figure 9g.--Wheat: Weekly Prices, Cash, East-Central Illinois Bid to Farmers, July and March Futures and Basis Chart, Average 1955-61



In spite of the independence of the two prices, the basis pattern was broadly the one we have now become accustomed to. It was fairly stable before harvest, narrowed sharply immediately after harvest, and then usually narrowed for the rest of the season.

The July-March spreads at the end of June were as follows:

1955	2 5/8	1957	8 1/4	1959	12 1/2
1956	7 7/8	1958	11 1/4	1960	12 3/4
				Average	9 1/4

The more recent years in the series have tended to be wide because relatively large stocks were built up at Chicago. The July-March spread is the price of storage for wheat for the period of the spread. It tends to be wide as stocks are large and narrow as stocks are small. Again it should be noted that this spread is the market price of storage at Chicago. It is reasonable to expect that stocks will be large at Chicago in the future, and so 10 cents should be used as a "normal" spread.

The month and amount of the peak basis during each year were as follows:

	Month	Basis		Month	Basis
1955-56	Jan.	9 1/2 under	1959-60	Feb.	Even
1956-57	Dec.	13 under	1960-61	Oct.	8 1/2 under
1957-58	Jan.	12 1/2 under	Average	Jan.	12 3/4 under
1958-59	Feb.	12 under			

From these amounts we should draw two conclusions: that holding wheat past January is somewhat pointless and that about 12 cents under is a reasonable basis expectation.

Basis conclusions. This cursory examination of basis behavior leads to several conclusions:

1. Basis patterns are broadly similar from one year to the next.

2. There are substantial year-to-year variations in basis patterns.

3. The different grains have different amounts of basis regularity, the basis for corn and soybean being more regular than that for oats and wheat.

4. One of the principal factors causing year-to-year variation in basis is the supply of and demand for storage.

5. A second major factor affecting basis is the relative supply of and demand for grain in Chicago and at outside points.

6. Basis is a rational market price that responds to economic forces. It is therefore subject to individual-year analysis. That is, basis variations from averages are forecastable by careful students of basis.

Farmer Use of Futures

Use in connection with a farm business. There is a difference between using futures markets in connection with a farm business and speculating in commodity futures. The use of futures markets in connection with a farm business is generally speculative. Futures can be used in an attempt to increase the total price of cash grain or to decrease the cost of feeding operations. In either case the key questions to be answered are: "Is this the appropriate time to buy?" or "Is this the appropriate time to sell?"

The answers to these questions are speculative. Success or failure depends on making the right forecast about subsequent price behavior. This is not an unusual experience for farmers. Selecting the time to buy and sell is the most important marketing problem of farmers. It is part of their usual grain speculation. Futures markets can be used as an adjunct to the usual grain speculation of farmers. Futures trading is a device by which farmers can price grain ahead--to either sell ahead or buy ahead. Accordingly the first rule is that the size of the futures position must be the same (as nearly as possible, because of the size of the unit of futures contracts) as the size of the cash grain position involved.

Farmers speculate in futures markets aside from their farming businesses. This is an ancient and honorable activity, but it is not related to the farm business. When farmers speculate in futures markets, they are no different from physicians, lawyers, and the like. This activity is outside the scope of the present discussion.

A futures market position must be either long or short. It must be opposite to the position existing in the cash grain on which the farmer is establishing a price. If it is the same as the existing cash position, the farmer is simply taking on a speculation in addition to the cash-grain speculation that already exists.

Farmers can use futures markets in four ways: (1) to fix the price of a growing or not-yet-planted crop; (2) to fix the price of grain in storage for deferred delivery; (3) to fix the cost of feed without taking immediate delivery; and (4) to speculate in the price of a crop that has been grown but for which storage is not available. The first two involve being short futures and the second two being long futures.

To fix the price of a crop before harvest. By selling futures before planting or during the growing season, farmers can assure themselves, within fairly narrow limits, of the net price they will receive at harvest. The essential thing that a farmer must be able to do is to look at existing futures quotations and determine what they mean in terms of a net price at his local elevator at harvest. This is a matter of understanding basis.

Table 3 shows the result of a planting time (January for wheat) sale of futures followed by a harvest sale of cash and purchase of futures. For corn, May 2 was selected as the planting date, and the price of December futures on that date was noted. From the basis studies, 18 cents under the December futures was selected as the most likely cash to futures price relationship prevailing at harvest. The 18 cents was subtracted from the December futures price to obtain a "target price." What does this mean? It means that if a farmer sold December futures sometime before harvest he would get a net price (the cash price received at the local elevator plus or minus the profits or losses on the December futures) of approximately the target price.

Let us follow the system through the 1955 experience for corn: On May 2 the December futures price was $1.37 5/8. Subtracting 18 cents gives a target price of $1.19 7/8. The market as a whole is saying that this is what it thinks the price of December futures will be. As we have seen, that probably will not be the case. The market is also saying that, come what may, it will assure the farmer that he will get approximately $1.19 7/8. The farmer decides that he is willing to accept this amount for harvest delivery. He therefore sells December futures in an amount equal to the amount that he expects to produce and deliver. Suppose that he expects to produce 10,000 bushels; he sells 10,000 bushels of December futures. On October 17 he harvests, delivers, and sells cash corn to his local elevator and receives the then current market price of $1.06 for it. At the same time he buys December futures, offsetting the original contract and closing out his futures position. The December futures price on October 17, 1955, was $1.27 7/8. He sold at $1.37 7/8 and bought at $1.27 7/8. He therefore has a profit of 10 cents a bushel, or $1,000. He adds this 10-cent profit to the $1.06 that he received from the elevator, for a net price of $1.16. To complete the transaction we should subtract a commission of approximately 1/2 cent a bushel on the futures transaction.

It should be especially noted that these two transactions are separate. The farmer sells his cash corn at the local elevator. He makes the futures transaction with a commission futures merchant. The only places that the two get together are in the farmer's system of figuring how much he got for his corn and, more importantly, in his bank account. The farmer is operating two separate and opposite but parallel transactions.

The net price received in 1955 was 3 7/8 under the target price. Why? Because the basis was wider than the 18-cent "normal" harvest basis. The basis chart (Figure 6a) shows a sharp break at just the time he harvested and sold. Had he sold cash (and bought December futures) one week sooner, he would have been precisely on target.

As we look across the bottom line of the corn section of Table 3, we see by how much the target was missed. The net price was under the target price three times and over it four times. The range was 4 1/4 under to 4 1/8 over. This was the extent of the uncertainty in the net price to be received by selling December futures.

The size of the misses would have been reduced if we had injected some flexibility into the date of sale of corn and purchase of the December futures.

Table 3.--Sales of Grain at Planting Season (January for Wheat), Target Prices and Comparison of Target and Realized Prices, 1955-61 Crops

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
Corn								
May 2	December futures	137 7/8	142 1/8	125 1/4	119 5/8	115 1/2	110 3/4	120 5/8
	Average harvest basis	18	18	18	18	18	18	18
	Target price	119 7/8	124 1/8	107 1/4	101 5/8	97 1/2	92 3/4	102 5/8
May 2	Sell December futures	137 7/8	142 1/8	125 1/4	119 5/8	115 1/2	110 3/4	120 5/8
October 17	Buy December futures	127 7/8	135 3/4	121 5/8	110 5/8	108 1/8	107 7/8	109 1/2
	Profit or loss	+10	+6 3/8	+3 5/8	+9	+6 3/8	+2 7/8	+11 1/8
October 17	Sell cash	106	113 1/2	100 1/2	95	94	94	95
	Net price	116	119 7/8	104 1/8	104	100 3/8	96 7/8	106 1/8
	Miss of target	3 7/8-	4 1/4-	3 1/8-	2 3/8+	2 7/8+	4 1/8+	3 1/2+
Soybeans								
May 16	November futures	235 3/4	255	224 1/2	221 3/8	213 7/8	210 3/8	253 1/2
	Average harvest basis	17	17	17	17	17	17	17
	Target price	218 3/4	238	207 1/2	204 3/8	196 7/8	193 3/8	236 1/2
May 16	Sell November futures	235 3/4	255	224 1/2	221 3/8	213 7/8	210 3/8	253 1/2
October 3	Buy November futures	237	238 3/4	227 1/8	216	213 3/4	212 7/8	238 3/4
	Profit or loss	-1 1/4	+16 1/4	-2 5/8	+5 3/8	+0 1/8	-2 1/2	+14 3/4
October 3	Sell cash	222 1/2	215	207	199	197	200	225
	Net price	221 1/4	231 1/4	204 3/8	204 3/8	197 1/8	197 1/2	239 3/4
	Miss of target	2 1/2+	6 3/4-	3 1/8-	0	0 1/4+	4 1/8+	3 1/4+
Oats								
March 14	July futures	67 1/8	62 7/8	65 1/2	62	62 7/8	70 7/8	72 3/4
	Average harvest basis	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2
	Target price	56 5/8	52 3/8	55	51 1/2	52 3/8	60 3/8	62 1/4
March 14	Sell July futures	67 1/8	62 7/8	65 1/2	62	62 7/8	70 7/8	72 3/4
July 11	Buy July futures	63 3/8	71 3/4	67 1/2	65	66 5/8	70 1/8	73 1/4
	Profit or loss	+3 3/4	-8 7/8	-2	-3	-3 3/4	+0 3/4	-0 1/2
July 11	Sell cash	53 1/2	63	58	53	58	61	62
	Net price	57 1/4	54 1/8	56	50	54 1/4	61 3/4	61 1/2
	Miss of target	0 5/8+	1 3/4+	1+	1 1/2-	1 7/8+	1 3/8+	0 3/4-

Table 3.--Sales of Grain at Planting Season (January for Wheat), Target Prices and Comparison of Target and Realized Prices, 1955-61 Crops (Continued)

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
Wheat								
January 10	July futures	213 3/8	198 7/8	228 1/8	188 1/2	182	183 3/4	189 3/4
	Average harvest basis	17	17	17	17	17	17	17
	Target price	196 3/8	181 7/8	211 1/8	171 1/2	165	166 3/4	172 3/4
January 10	Sell July futures	213 3/8	198 7/8	228 1/8	188 1/2	182	183 3/4	189 3/4
July 5	Buy July futures	198 1/2	206 1/2	202 3/8	181 1/4	187 1/4	183 7/8	192 7/8
	Profit or loss	+14 7/8	-7 5/8	+25 3/4	+7 1/4	-5 1/4	-0 1/8	-3 1/8
July 5	Sell cash	185 1/2	185 1/2	181	159	179	177 1/2	189
	Net price	200 3/8	177 7/8	206 3/4	166 1/4	173 3/4	177 5/8	185 7/8
	Miss of target	4+	4-	4 3/8-	5 1/4-	8 3/4+	11 1/8+	13 1/8+

Computed from Appendix Tables 1-4.

We arbitrarily selected October 17. Had we allowed this date to vary, attempting to close the transactions when the basis was 18 cents, we would have been closer.

Was this a good idea? Obviously yes. In 1955 the farmer received 10 cents more than he would have if he had not used the futures market as an aid in selling forward. As we look across the profit-and-loss line of the corn section, we note that it was advantageous to sell ahead in all of the seven years. But this should not be taken as a general rule. In discussing the seasonal pattern of December futures prices, we noted reasons why it had occurred and why we should not expect it to recur regularly. In the long run the increases and decreases in futures prices will tend to average out to zero. Thus the profits and losses will tend to average out to zero if the same things are done each year in routine fashion.

The most important point to note in Table 3 is the extent of the misses of the target. They are a measure of how accurately grain can be priced ahead for harvest delivery. The use of futures to sell ahead of harvest is not a device for increasing the price of grain each year. Rather, it is a device by which farmers can accept a price that is offered when in their judgment it makes a good sale. The futures market is not saying what the price will be at harvest. It is simply offering an approximate price now. Whether or not a farmer accepts is a speculative decision that he must make. The important point is that farmers need to be able to look at the futures market and figure out what the quotation means in terms of the net price at their local elevator at harvest. They then have a rational basis for deciding whether or not to sell ahead.

In most localities elevators will bid for harvest delivery before planting and throughout the growing season. Thus the farmer has a choice: he can contract ahead at a firm price with the elevator for cash grain, or he can sell futures. Contracting ahead has three advantages: the exact price is known, the quantity is divisible by less than units of 1,000 bushels, and it is not necessary to maintain a margin deposit as in the case of futures.

Using futures to sell ahead has two advantages: First, the average forward price is higher. As farmers sell ahead of planting or during the growing season, someone is selling futures. Perhaps the elevator is selling futures against its purchases from farmers, or it may be that the elevator makes a cash forward contract with an interior merchant or processor who, in turn, sells futures. Whoever is doing it is bidding enough less for the cash grain to cover the cost, including the risk due to variable results that we have labeled "miss of target," and leave a profit.

The second advantage is that use of futures provides greater flexibility--greater ease for the farmer to change his mind. Suppose that at planting time a farmer notes that the December corn futures indicates a net price for harvest delivery that he thinks will make a good sale and so he sells. During July the weather gets hot and dry and it begins to look as if the crop will be short. The price starts up. What looked like a good sale early now looks like an error. Our friend can reverse his sale just as quickly as he can call his broker and buy an offsetting December contract. All it will cost him to again be long his growing crop is the amount that the price has gone up while he was becoming alert to the developing situation.

Or suppose that a farmer sells at planting time and during June and July the price goes down 12 cents as the result of favorable growing conditions. He now figures the indicated net price and decides that he would rather be long cash than long cash and short futures. He can offset his futures contract. He should put the profits on the futures contract away to add to the price received for the cash grain at harvest.

In the case of corn and soybeans, the estimates of basis we have used may overstate the cash to futures discounts that will prevail in the future. During the first three of the seven years, the net price of corn was under the target, and in the last four it was over. These last four years may be more representative of the future than the whole period is. Perhaps a harvest basis of 14 to 15 cents will be more accurate in the future.

The soybean misses have a somewhat similar, though less pronounced, tendency. Fifteen cents may be a more appropriate discount in the future.

Oat prices fell most nearly on target of the four grains. The largest miss was 1 7/8 cents.

Net prices of wheat miss the target badly. As noted in the basis discussion, wheat prices are not closely tied to Chicago. The 17-cent discount of cash to futures is fairly close to the cost of delivering wheat to Chicago from the northern part of the Illinois wheat production area. It should therefore be regarded as nearly a maximum discount rather than an average or normal discount. The target price tends to be a minimum rather than an accurate target.

To fix the price of grain in storage for later delivery. Table 4 is an exercise in forward pricing of grain that is in storage. The procedure is the same as pricing forward for harvest delivery at planting time. Target prices were established for each grain by subtracting a "normal" basis from a futures price near the end of the storage season. This target price is the approximate net price that the market was bidding for late-season delivery. That is, on October 17, 1955, the market was saying to east-central Illinois farmers, "We will pay you approximately $1.28 1/2 per bushel for corn to be delivered about July 1, 1956." The procedure was for the farmer to sell July futures in an amount equal to the amount of corn he had in storage and about the following (1956) July 1 to buy July futures, sell cash corn at his local elevator, and subtract the loss on the futures contract from the price received for his cash corn.

The "miss of target" figures measure the accuracy of the indicated forward price. They are by no means precise. Yet they fall within fairly narrow limits. They were much less variable than the level of prices of the grains. The essential point is that regardless of what happened to the level of prices the market came fairly close to performing on its net price commitment. For example, on October 3, 1959, the target price for soybeans was $2.17 1/8. By June 25, 1960, the price level (July futures) of soybeans had declined 13 cents. Yet the market missed performance by only 1/8 cent. The following year the price level increased 37 cents. The market missed the forward price by only 1/4 cent. The dates for closing the transactions were always the same, leaving no room for judgment. Had these been less rigid the size of the misses would have been reduced.

Table 4.--Sales of Grain at Harvest for Later Delivery, Target Prices, Comparison of Target and Actual Prices, and Gain Realized From Storage, 1955-61 Crops

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
Corn								
October 17	July futures	136 1/2	146 1/2	131 1/2	120 1/2	117 1/2	117 3/8	122 1/8
	Average July basis	8	8	8	8	8	8	8
	Target price	128 1/2	136 1/2	123 1/2	112 1/2	109 1/2	109 3/8	114 1/8
October 17	Sell July futures	136 1/2	146 1/2	131 1/2	120 1/2	117 1/2	117 3/8	122 1/8
June 25	Buy July futures	149 1/2	129 7/8	135	126	116 1/8	112 7/8	
	Profit or loss	-13	+16 5/8	-3 1/2	-5 1/2	+1 3/8	+4 1/2	
June 25	Sell cash	144 1/2	120	124	118	108	100 1/2	
	Net price	131 1/2	136 5/8	120 1/2	112 1/2	109 3/8	104 1/2	
	Miss of target	3+	1/8+	3-	0	1/8-	4 7/8-	
	October 17 price	106	113 1/2	100 1/2	95	94	94	95
	Net price realized	131 1/2	136 5/8	120 1/2	112 1/2	109 3/8	104 1/2	
	Return to storage	25 1/2	23 1/8	20	17 1/2	15 3/8	10 1/2	
Soybeans								
October 3	July futures	244	247 1/4	234	225 1/2	224 1/8	224 1/4	253 1/4
	Average July basis	7	7	7	7	7	7	7
	Target price	237	240 1/4	227	218 1/2	217 1/8	217 1/4	246 1/4
October 3	Sell July futures	244	247 1/4	234	225 1/2	224 1/8	224 1/4	253 1/4
June 25	Buy July futures	299 3/4	233 5/8	224 7/8	224 1/2	211 1/8	261 1/4	
	Profit or loss	-55 3/4	+13 5/8	+9 1/8	+1	+13	-37	
June 25	Sell cash	284 1/2	222	219	217	204	254	
	Net price	228 3/4	235 5/8	228 1/8	218	217	217	
	Miss of target	8 1/4-	4 7/8-	1 1/8+	1/2-	1/8-	1/4-	
	October 3 price	222 1/2	215	207	199	197	200	225
	Net price realized	228 3/4	235 5/8	228 1/8	218	217	217	
	Return to storage	6 1/4	20 5/8	21 1/8	19	20	17	

Table 4.--Sales of Grain at Harvest for Later Delivery, Target Prices, Comparison of Target and Actual Prices, and Gain Realized From Storage, 1955-61 Crops (Continued)

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
Oats								
July 11	March futures	68 3/8	77 3/4	73 1/4	70 1/8	70 3/8	74 1/2	78 7/8
	Average January basis	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
	Target price	62 7/8	72 1/4	67 3/4	64 5/8	64 7/8	69	73 3/8
July 11	Sell March futures	68 3/8	77 3/4	73 1/4	70 1/8	70 3/8	74 1/2	78 7/8
January 3	Buy March futures	66	77 3/4	63 5/8	65 1/2	76 1/8	65 1/2	72
	Profit or loss	+2 3/8	0	+9 5/8	+4 5/8	-5 3/4	+9	+6 7/8
January 3	Sell cash	59 1/2	73	62	57	72	57 1/2	65
	Net price	61 7/8	73	71 5/8	61 5/8	66 1/4	66 1/2	71 7/8
	Miss of target	1-	0 3/4+	3 7/8+	3-	1 3/8+	2 1/2-	1 1/2-
	July 11 price	53 1/2	63	58	53	58	61	62
	Net price realized	61 7/8	73	71 5/8	61 5/8	66 1/4	66 1/2	71 7/8
	Return to storage	8 3/8	10	13 5/8	8 5/8	8 1/4	5 1/2	9 7/8
Wheat								
July 5	March futures	203 3/8	214 1/2	219 1/4	193 3/4	199 7/8	196 3/4	206 5/8
	Average January basis	12	12	12	12	12	12	12
	Target price	191 3/8	204 1/2	207 1/4	181 3/4	187 7/8	184 3/4	194 5/8
July 5	Sell March futures	203 3/8	214 1/2	219 1/4	193 3/4	199 7/8	196 3/4	206 5/8
January 23	Buy March futures	206 5/8	241	217 3/4	197 5/8	202 3/8	211 3/4	202 3/8
	Profit or loss	-3 1/4	-26 1/2	+1 1/2	-3 7/8	-2 1/2	-15	+4 1/4
January 23	Sell cash	197	225	205 1/2	183	195	193	187
	Net price	193 3/4	198 1/2	207	179 1/8	192 1/2	178	191 1/4
	Miss of target	2 3/8+	6-	0 1/4-	2 5/8-	4 5/8+	6 3/4-	3 3/8-
	July 5 price	185 1/2	185 1/2	192	159	179	177 1/2	183
	Net price realized	193 3/4	198 1/2	207	179 1/8	192 1/2	177	191 1/4
	Return to storage	8 1/4	13	15	20 1/8	13 1/2	1/2	8 1/4

Computed from Appendix Tables 1-4.

Again, the decision about whether to accept the forward price is a speculative one. The opportunity to forward price is always present. Whether it should be accepted or not depends upon whether the person holding the grain thinks that the level of price, as measured by the distant futures, is going to go up or not. If the futures prices do subsequently go up, he will regret having priced forward. If they go down, he will profit by selling. The figures for "profit or loss" in Table 4 indicate whether it turned out to be a good idea to price forward or simply to hold cash grain for later sale.

Between them, Tables 3 and 4 show 48 transactions in futures during the first six of the years. There were 25 profits, 22 losses, and one break-even, meaning that the price went down 25 times, up 22, and did not change once. The average size of the profits was 11 3/4 cents, and the average of the losses was 9 1/4 cents. On average it was more profitable to be short than long, but this is not a meaningful average. It is too near even to be ascribed to anything other than chance.

In contemplating the question of a forward sale, a farmer must look at the price of the distant future, calculate what it means in terms of the price at his local elevator during the month of maturity of the futures contract, and then decide whether or not he wants to be long at that price. Let us review such a decision: On October 3, 1961, the cash price of soybeans was $2.25 and the July futures price was $2.53 1/4. Assuming a normal basis of seven cents, the forward price was $2.46 1/4. The government support price $2.42, including all possible assistance and quality premiums. The crop was obviously larger than would be used up. The policy of the government was to sell any soybeans that it took over at a price equivalent to $2.47 1/2 to farmers. The question that the farmer should have asked himself was: "Do I want to be long soybeans that are now priced at $2.46 1/4 for delivery next July 1?"--not "Do I want to be long soybeans at $2.25?" The problem was to ask the right question.

Table 4 includes a section on storage for each of the grains. It shows the harvest price, the net price realized by forward pricing through the use of futures contract sales, and the returns to storage. The return to storage is the amount of increase in the cash price in relation to the futures price. These same values can be seen visually in the basis charts that we reviewed earlier.

We noted from our charts that the prices of cash grains tend to go up seasonally. These increases are the net values of two kinds of change: payment for storage and price level. In the long run the change in the price level averages out to zero, and only the payment for storage remains.

The size of the payments for storage vary substantially from year to year. The price of storage is a competitive market price that depends on the supply of and demand for storage space.

The importance of the concept of storage is that farmers can profitably continue to use storage space even though they think that the price will decline. Suppose that at harvest or shortly after a farmer looks at the existing price and decides that this is a good time to sell--that the price is more likely to go down

than up. If he does sell, his existing storage space will remain empty, with no return until the next harvest. If he does not use futures, he must be long to obtain a return from the use of storage. If he does use futures to price ahead, he can get a storage return without being vulnerable to a price decline; that is, he can have his cake and eat it too.

The use of futures to price stored grain ahead offers farmers an opportunity to change their minds that is not possible when they sell cash grain. The sale and delivery of cash grain is quite final. Once a farmer sells and delivers, he is out of the game. If he is pricing forward via futures, he can get back in at any time that, in his judgment, he should. Two examples illustrate this point: During the 1960 harvest a selling price of $2.00 for soybeans appeared to be reasonable to many people. The crop was large, and demand did not appear vigorous. During October and November several bullish things happened. Each successive estimate of the size of the crop was smaller. Export demand for soybeans was vigorous. The government became quite active in exporting surplus oil. In early December news of a Chinese drought meant that China would not compete with U. S. soybean exports. That did it! A $2.00 sale no longer looked good. If a farmer had sold at $2.00, he was through. Had he sold July futures on October 3 at $2.24 1/4, he could have bought them back and been long the stored crop. He could have done so as late as December 19 at as low as $2.24.

For a second example we will take corn in the fall of 1961. As we have seen, the target price was $1.14 1/8 on October 17. This price looked good because of the prospect of large government sales. By the end of February the July futures had declined to $1.12. Disregarding futures profits already accrued, the target price was then $1.04. In view of the large amount of corn moving into the support structure, this did not look like a good sale. It was a price at which most farmers preferred to be long. Farmers who had sold July futures against stored corn on October 17 could take a 10-cent profit and again be long stored corn.

In Tables 3 and 4 we adhered rigidly to pricing forward at planting and harvest. The opportunity offered farmers is by no means so rigid. By use of futures, farmers can decide to fix or unfix the price for forward delivery at any time that their speculative judgment tells them to do so.

Table 5 combines the operations shown in Tables 3 and 4 and introduces flexibility in the timing of operations. It illustrates a system of pricing forward at planting time for delivery after the crop has been produced and stored for six to nine months.

The procedure for corn was (1) to sell December futures at planting time; (2) to buy December and sell July, after trading starts, for delivery the following July (about August 1) whenever a premium of 10 cents for the July can be obtained or on November 14, whichever occurs first; and (3) to sell cash and buy July futures when the cash price is within eight cents of the July futures price, but not later than July 3. The dates of execution of the switch from December to July and the closing of the transactions are shown in the table. The normal spread of 10 cents was established by examining the data in appendix Table 1. The target prices were a net of two cents over the December futures (plus 10 minus 8) for delivery upwards of 14 months forward.

Table 5.--Planting Season Sales (January for Wheat) for Late-Season, Delivery, Target Prices and Realized Prices, 1955-61 Crops

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
Corn								
May 2	December futures	137 7/8	142 1/8	125 1/4	119 5/8	115 1/2	110 3/4	120 5/8
	Net basis +10 -8	2+	2+	2+	2+	2+	2+	2+
	Late June of following year target price	139 7/8	144 1/8	127 1/4	121 5/8	117 1/2	112 3/4	122 5/8
May 2	Sell December futures	137 7/8	142 1/8	125 1/4	119 5/8	115 1/2	110 3/4	120 5/8
	Switch whenever December-July difference is 10 or November 14 (date)	Nov. 7	Aug. 29	Sept. 5	Oct. 24	Nov. 13	Nov. 7	Aug. 1
	Buy December futures	129 1/2	138 3/4	123 1/8	109 3/8	112 7/8	107 5/8	116 5/8
	Profit or loss	+8 3/8	+3 3/8	+2 1/8	+10 1/4	+2 3/8	+3 1/8	+4
	Sell July futures	139 3/4	149	133 1/8	119 3/8	120 7/8	118 1/4	126 5/8
	Close whenever basis is 8 under or July 3 (date)	June 4	June 4	April 10	June 19	July 1	July 3	
	Buy July futures	149 7/8	127 1/2	126 1/2	126 1/2	116 1/2	114	
	Profit or loss	-10 1/8	+11 1/2	+6 5/8	-7 1/8	+4 3/8	+4 1/4	
	Sell cash	142 1/2	119 1/2	120	118 1/2	109	102 1/2	
	Net price	140 1/2	144 3/8	128 3/4	121 5/8	115 3/4	109 7/8	
	Miss of target	5/8+	1/4+	1 1/2+	0	1 3/4-	2 5/8-	
Soybeans								
May 16	November futures	235 3/4	255	224 1/2	221 3/8	213 7/8	210 3/8	253 1/2
	Net basis +12 -7	5+	5+	5+	5+	5+	5+	5+
	Late June of following year target	240 3/4	260	229 1/2	226 3/8	218 7/8	215 3/8	258 1/2
May 16	Sell November futures	235 3/4	255	224 1/2	221 3/8	213 7/8	210 3/8	253 1/2
	Switch whenever November-July difference is 12 or October 31 (date)	Oct. 31	Oct. 17	Oct. 31	Oct. 31	Oct. 30	Oct. 24	Aug. 2
	Buy November futures	236 1/2	241 1/2	226 1/2	210 3/4	217	216 7/8	246 1/4
	Profit or loss	-3/4	+13 1/2	-2	+10 5/8	-3 1/8	-6 1/2	+7 1/4
	Sell July futures	241 3/4	254 1/4	236 1/4	223	228 1/2	229 1/2	259

Table 5.--Planting Season Sales (January for Wheat) for Late-Season Delivery, Target Prices and Realized Prices, 1955-61 Crops (Continued)

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
	Close whenever basis is 7 under or July 2 (date)	July 2	July 2	June 19	July 2	June 10	March 20	March 22
	Buy July futures	274 1/4	238 3/8	224 1/4	223 3/4	212	292	249
	Profit or loss	-32 1/2	+15 7/8	+12	-3/4	+16 1/2	-62 1/2	+10
	Sell cash	258 1/2	224 1/2	218 1/2	217	205	285	242
	Net price	225 1/4	251 7/8	228 1/2	226 7/8	218 3/8	216	259 1/4
	Miss of target	15 1/4-	8 1/8-	1-	1/2+	1/2-	5/8+	3/4+
Oats								
March 14	July futures	67 1/8	62 7/8	65 1/2	62	62 7/8	70 7/8	68 1/2
	Net basis +5 -5 1/2	1/2-	1/2-	1/2-	1/2-	1/2-	1/2-	1/2-
	Target price	66 5/8	62 3/8	65	61 1/2	62 3/8	70 3/8	68
March 14	Sell July futures	67 1/8	62 7/8	65 1/2	62	62 7/8	70 7/8	68 1/2
	Switch whenever July-March difference is 5 or June 27 (date)	June 27	June 6	June 6	June 6	June 19	June 27	May 9
	Buy July futures	65 1/4	64 7/8	62 3/4	62	66 3/8	70 3/8	67
	Profit or loss	+1 7/8	-2	+2 3/4	0	-3 1/2	+1/2	+1 1/2
	Sell March futures	69 1/4	71	69 1/4	68 1/4	71 3/8	75 7/8	75 1/2
	Close whenever basis is 5 1/2 under or January 3 (date)	Dec. 5	Nov. 21	Nov. 14	Jan. 2	Dec. 11	Jan. 3	Jan. 3
	Buy March futures	64 1/2	79 3/4	67 1/2	65 1/2	76	65 1/2	72 1/4
	Profit or loss	+4 3/4	-8 3/4	+1 3/4	+2 3/4	-4 5/8	+10 3/8	+3 1/4
	Sell cash	59 1/2	74 1/2	63	57	71	57 1/2	62
	Net price	66 1/8	63 3/4	67 1/2	59 3/4	62 7/8	68 3/8	66 3/4
	Miss target	1/2-	7/8+	2 1/2+	1 3/4-	1/2+	2-	1 1/4-
Wheat								
January 10	July futures	213 3/8	198 7/8	228 1/8	188 1/2	182	183 3/4	190 1/4
	Net basis +10 -12	2-	2-	2-	2-	2-	2-	2-
	Target price	211 3/8	196 7/8	226 1/8	186 1/2	180	181 3/4	188 1/4

Table 5.--Planting Season Sales (January for Wheat) for Late-Season Delivery, Target Prices and Realized Prices, 1955-61 Crops (Continued)

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
January 10	Sell July futures	213 3/8	198 7/8	228 1/8	188 1/2	182	183 3/4	190 1/4
	Switch whenever July-March difference is 10 or July 5 (date)	July 5	July 5	July 6	May 16	May 15	May 16	April 3
	Buy July futures	198 1/2	206 1/2	202 3/8	184	187	185 3/8	188
	Profit or loss	+14 7/8	-7 5/8	+25 3/4	+4 1/2	-5	-1 5/8	+2 1/4
	Sell March futures	203 3/8	214 1/2	210 7/8	196	197 3/4	196 3/4	200 1/4
	Close whenever basis is 12 under or January 30 (date)	Jan. 23	Jan. 30	Jan. 23	Jan. 30	Oct. 9	Sept. 12	Nov. 24
	Buy March futures	206 5/8	237 1/4	217 3/4	197 5/8	200 3/4	197 5/8	209 5/8
	Profit or loss	-3 1/4	-22 3/4	-6 7/8	-1 5/8	-3	-7/8	-9 3/8
	Sell cash	197	221	205 1/2	183 1/2	191	189	204
	Net price	208 5/8	190 5/8	224 3/4	186 3/8	183	186 1/2	196 7/8
	Miss of target	2 3/4-	6 1/4-	1 3/4-	1/8-	3+	4 3/4+	8 5/8+

This table is based on the data in Appendix Tables 1-4. Target prices would have been more precisely realized in the instances where they were exceeded had daily data been used or automatic orders been placed with a commission futures merchant.

For soybeans the procedure was (1) to sell November futures at planting time; (2) to switch to July at a 12-cent premium, but not later than October 31; and (3) to close the transaction on a seven-cent basis, but not later than July 2. The target prices were a net of five cents over the November futures (plus 12 minus 7).

For oats the procedure was to (1) sell July futures at planting time; (2) switch to March at a five-cent premium, but not later than June 27; and (3) close out the transaction at a basis of 5 1/2 cents, but not later than January 3. The reasons for closing out so early were discussed in the section on basis behavior. Target prices were a net of 1/2 cent under the July future.

For wheat the procedure was to (1) sell July futures on January 10; (2) switch to the subsequent March contract at a premium of 10 cents, but not later than July 5; and (3) close out the transaction at a basis of 12 under, but not later than January 30.

The target prices were not always precisely realized. They sometimes fell short because spreads did not get as wide as the target spreads and because the basis did not always get as narrow as the target basis. They were sometimes exceeded because the actual spreads were wider than the target spreads when trading in the subsequent futures started or because overnight basis changes were rapid. Target prices would have been slightly more accurately realized if daily instead of weekly prices had been used.

For corn, soybeans, and oats, the misses of the target prices were small. Wheat basis and spreads are less regular; hence the misses of target tend to be larger.

It should again be emphasized that the profits and losses from the futures transactions tend to average out to zero. The use of futures in a routine way, such as is illustrated in Table 5, does not in the long run add to or subtract from the realized price of grain. Futures markets are a tool for pricing forward when a farmer's best speculative judgment tells him it is time to fix the price of grain.

To fix the cost of feed without taking immediate delivery. Livestock feeders are subject to several kinds of uncertainty. In addition to production uncertainties, there are market uncertainties with regard to the selling price of the livestock and the cost of feed. Futures markets can have usefulness in fixing the cost of feed.

As a livestock feeder starts a feeding program, he commits himself to the use of feed. The feed that he does not have on hand he must subsequently buy. He is short a requirement of feed. If at the outset of the program he buys a sufficient amount of feed to last the entire feeding season, he can nail down one more cost item and thus reduce his total uncertainty. The feeding season is usually regarded as from fall to fall. Thus we are talking about buying feed in the fall of the year. In the main we are talking about buying corn.

Producers who do not have a sufficient amount of storage space or who do not wish to tie up their money in corn inventory can fix the cost of corn by buying futures. They are short cash corn for feeding requirements. They therefore buy corn futures in an amount equal to their actual feed requirements. As space is available and they acquire cash corn, they sell the corn futures. Profits made on the futures transactions are subtracted from the price paid for the cash corn to get the net cost of feed. Similarly, losses taken on the futures transaction are added to the price of the cash corn to get the net cost of feed.

If cash and futures prices moved up and down precisely together, the price of the feed corn could be fixed at the price existing when the futures transaction was initiated. To illustrate let us suppose that a feeder observes that the price of cash corn at his local elevator is $.95. He likes this price and wishes to fix it for the supplemental feed corn that he will eventually buy. He buys futures at, say, $1.10, or 15 cents over the cash. Some months later when he needs the cash corn he pays $1.05. If the cash and futures prices have moved up the same amount, he will sell his futures contract for $1.20, realizing a 10-cent profit. He subtracts this cost from the $1.05 that he paid for cash corn, for a net cost (ignoring futures commission charges) of $.95.

However, as we have seen, cash and futures do not move up and down together. The cash gains in relation to the futures. Increases in the futures will not offset the increase in the cash price. This increase in cash in relation to the futures is equal to the going market price for storage. In effect, the feeder pays someone to store the corn that he has bought until he needs it. In fact, someone is storing the corn for him, and he should reasonably be expected to pay for this service.

In Table 6 we have set up an exercise in fixing corn prices by buying July futures. We assumed that the farmer needed to purchase about one-half year's supply of corn and that space would be available on the farm by April 1. Mid-November was selected as the most favorable time to initiate the transaction. The results were computed for the seven years 1955 to 1961.

In each of the seven years the net cost of the feed corn was higher than the harvest price; that is, the cash always gained in relation to the futures. The amount of this gain is shown on the line "payment for storage." It averaged 11 1/4 cents during the period. The experience here was that 4 1/2 months' storage cost an average of 11 1/4 cents, which is a high monthly rate. It probably overstates the long-term rate because of the very large basis gain in 1957 to 1958.

In those years in which there was a profit in futures, the net cost of feed corn was reduced; and in those years in which there was a loss, the net cost of feed corn was increased. There were losses in four years and profits in three. The average size of the losses was greater than that of the profits. This does not prove that farmers should not price feed corn ahead by buying futures. The period is too short to provide a reliable average. In the long run, profits and losses should be equal if the same transactions are made at the same time each year.

Table 6.--Purchases of Futures to Fix the Cost of Feed Corn, 1955-61 Crops

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
November 14	Buy July futures	135 1/4	148 7/8	127 3/8	120	120 7/8	115 5/8	120 1/8
April 2	Sell July futures	147 1/4	133 1/8	122 3/8	123 7/8	121 7/8	112 1/4	119 1/2
	Profit or loss	+12	-15 3/4	-5	+3 7/8	+1	-3 3/8	-5/8
April 2	Buy cash corn[1]	129	116	113	112 1/2	111	95 1/2	106 1/2
	Net cost of feed corn	117	131 3/4	118	108 5/8	110	98 7.8	107 1/8
November 14	Cash price	105	123	100	99	101	85	100
	Payment for storage	12	8 3/4	18	9 5/8	9	13 7/8	7 1/8
	April 2 basis	18 1/4	17 1/8	9 3/8	11 3/8	10 7/8	16 3/4	13

1/ Farmer's selling price at local elevator.

There are benefits from pricing feed corn ahead even though in the long run it only breaks even. It is a method by which the approximate cost of feed can be established. The knowledge of cost is useful in planning feeding operations. Pricing feed corn ahead reduces the total risk involved in feeding operations.

It is clear that the purchase of corn futures does not assure that the cost of corn will be the current price. It will be higher than the current price by the amount of basis gain. The problem, then, is to understand what the current futures prices mean in terms of the ultimate net cost of corn. The feeder should subtract the basis that he expects to exist at the time he wishes to buy and take delivery of cash corn from the current corn futures price. If he wishes to buy and take delivery of cash corn on April 2 and expects a basis of 13 under the July at that time, and the current price of July futures is $1.25, he should reckon his net cost at $1.12 ($1.25 minus 13). This becomes his target price. The bottom line in Table 6 shows the basis (cash at local elevators to July futures) on April 2 of each of the seven years. The average was 13 3/4 cents, and there was a substantial variation in this average. The amount that the April 2 basis varies is the amount of uncertainty that exists about the net cost of feed corn.

What should a farmer do? He should reckon his approximate net cost and then decide whether he wishes to fix that price or wait until a later time to buy.

To speculate in the price of a crop that has been produced but for which storage is not available. Farmers sometimes wish to delay the pricing of grain past the time they can hold cash grain on farms. They can do so by selling cash grain and replacing it with an equal amount of grain futures. This is speculation. They are long. If the price goes up, they will make money. If it goes down, they will lose money. Such speculation is an integral part of an ordinary farm business. Speculation in futures is neither more nor less a part of the farm business than maintaining a long position in cash grain so long as it replaces a cash-grain speculation that formerly existed.

Farmers often ask if they can sell cash grain at harvest and replace it with futures to take advantage of the seasonal rise in prices without incurring the costs of storage. This cannot be done. As we have seen, there is no regular seasonal pattern in grain futures prices, and cash prices increase in relation to futures prices so that whoever is long futures does, in effect, pay storage.

Table 7 shows the results of working out a repetitive system of replacing cash grain with futures at harvest and selling late in the season. The ending dates for corn and soybeans were placed just before the beginning of the delivery month. Ending dates for oats and wheat were placed in January because of the tendency noted earlier to top out seasonally at that time.

Whether the net price was increased or decreased can be quickly seen from the line "profit and loss" for each grain. It should be noted that the futures transactions are precisely opposite to those shown in Table 4 when grains were priced for deferred delivery.

It was pretty much of a stand-off for corn. The price went down in three of the first six years. The average size of the decreases was slightly larger than that of the increases.

Table 7.-- Purchase of Futures to Replace Cash Grain Sold at Harvest

		Crop year						
		1955	1956	1957	1958	1959	1960	1961
Corn								
October 17	Sell cash	106	113	100	95	94	94	95
October 17	Buy July futures	136 1/2	146 1/2	131 1/2	120 1/2	117 1/2	117 3/8	122 1/8
June 25	Sell July futures	149 1/2	129 7/8	135	126	116 1/8	112 7/8	
	Profit or loss	+13	-16 5/8	+3 1/2	+5 1/2	-1 3/8	-4 1/2	
	Net price	119	96 7/8	104	100 1/2	92 5/8	89 1/2	
	June 25 cash price	144 1/2	120	124	118	108	100 1/2	
	Cost of storage	25 1/2	23 1/8	20	17 1/2	15 3/8	10 1/2	
	June 25 basis	5-	9 7/8-	11-	8-	8 1/8-	12 3/8-	
Soybeans								
October 3	Sell cash	222 1/2	215	207	199	197	200	225
October 3	Buy July futures	244	247 1/4	234	225 1/2	224 1/8	224 1/4	
June 25	Sell July futures	299 3/4	233 5/8	224 7/8	224 1/2	211 1/8	261 1/4	
	Profit or loss	+55 3/4	-13 5/8	-9 1/8	-1	-13	+37	
	Net price	278 1/4	201 3/8	197 7/8	198	184	237	
	June 25 cash price	284 1/2	222	219	217	204	254	
	Cost of storage	6 1/4	20 5/8	21 1/8	19	20	17	
	June 25 basis	15 1/4-	11 5/8-	5 7/8-	7 1/2-	6 1/8-	7 1/4-	
Oats								
July 11	Sell cash	53 1/2	63	58	53	58	61	62
July 11	Buy March futures	68 3/8	77 3/4	73 1/4	70 1/8	70 3/8	74 1/2	78 7/8
January 3	Sell March futures	66	77 3/4	63 5/8	65 1/2	76 1/8	65 1/2	72
	Profit or loss	-2 3/8	0	-9 5/8	-4 5/8	+5 3/4	-9	-6 7/8
	Net price	51 1/8	63	48 3/8	48 3/8	63 3/4	52	55 1/8
	January 3 cash price	59 1/2	73	62	57	72	57 1/2	65
	Cost of storage	8 3/8	10	13 5/8	8 5/8	8 1/4	5 1/2	9 7/8
	January 3 basis	6 1/2-	4 3/4-	1 5/8-	8 1/2-	4 1/8-	8-	7-
Wheat								
July 5	Sell cash	185 1/2	185 1/2	192	159	179	177 1/2	183
July 5	Buy March futures	203 3/8	214 1/2	219 1/4	193 3/4	199 7/8	196 3/4	206 5/8
January 23	Sell March futures	206 5/8	241	217 3/4	197 5/8	202 3/8	211 3/4	202 3/8
	Profit or loss	+3 1/4	+26 1/2	-1 1/2	+3 7/8	+2 1/2	+15	-4 1/4
	Net price	188 3/4	212	190 1/2	162 7/8	181 1/2	192 1/2	178 3/4
	January 23 cash price	197	225	205 1/2	183	195	193	187
	Cost of storage	8 1/4	13	15	20 1/8	13 1/2	1/2	8 1/4
	January 23 basis	9 5/8-	16-	12 1/4-	14 5/8-	7 3/8-	18 3/4-	15 3/8-

The cash price the farmer would have received if he had held cash corn in store to June 25 is shown. The net price he actually received was subtracted from this cash price. The difference is the amount that he paid, in effect, for storage. These were substantial amounts, generally more than covering the full cost of on-farm storage. It should be noted that these are the same amounts shown in Table 4.

But this is not all of the loss that should be met in storing corn. The prices shown are for No. 2 yellow. The corn delivered at harvest was subject to moisture discounts. Part of the discount exists because the market does not pay for water, but part of it is an actual discount to cover the cost of drying corn down to storable moisture.1/

Two things are clear: (1) it pays to hold corn past harvest when space is available, either as a long cash position or as a price forward via a sale of futures, and (2) it does not pay to routinely replace cash with futures. When storage space is not available, it sometimes pays to replace cash with futures. Selecting the years to do so is a matter of speculating in the price of corn. And farmers are fairly skilled at this. The problem is to figure out the cash farm price at which the farmer is actually going long when he buys the July future. In the fall of 1959, with the cash price at 94 cents and the government loan available to all producers at $1.06, corn seemed a cinch to go up. It did go up 14 cents a bushel, but July futures went down 1 3/8 cents. The cash price increased 15 3/8 cents in relation to the July futures price. Thus the buyer of July contracts actually went long cash at $1.09 3/8. Knowing this, few farmers would have replaced cash with futures.

How does a farmer know at what price he is going long? The answer is a matter of anticipating basis. The June 25 basis is shown in Table 7. We earlier established a "normal" basis for June 25 of eight cents under the July. Thus on October 17, 1959, the farmer should have said to himself, "If I subtract eight cents from $1.17 1/2, I find that I am going long cash corn as of next summer at a cash price of $1.09 1/2. The cash price must go up to $1.09 1/2 before I make any profit. Do I think the price is going higher than $1.09 1/2?"

The same conclusions are apparent with regard to soybeans, oats, and wheat. In the long run the replacement of cash with futures is a break-even proposition. To successfully use futures markets in this way requires a better-than-average job of speculation. A rather large payment for storage must, in effect, be made when cash is replaced by futures. While variable, ending basis can be effectively used to determine the cash-grain price represented by the futures price.

The data for Table 7 are included in Appendix Tables 1 to 4 and are shown visually in the price and basis charts.

Some common pitfalls in futures trading. There are several ways in which farmers (and others) can go wrong in their futures trading operations. There is uncertainty in the outcome because of variability in basis. This is to be expected, and a trade that fails to materialize as expected because of an unusual basis behavior should not be scored as an error.

1/ For a full discussion of discounts, see University of Illinois Circular 833.

The first type of error is improper calculation of basis--the failure to add the right normal basis to or subtract it from the right future. The exercises performed in the various tables should be repeated, using slightly different dates. Proposed transactions should be tested on previous years.

The second type of error is to fail to relate the futures transactions to the farm business in the size and direction of position. The futures position must be as nearly as possible the same size as the cash position. Margin requirements for trades in grain futures are small. Farmers are tempted to take larger futures positions than the cash positions being offset without realizing the large losses and gains that can result from small price changes. The temptation is particularly great to replace cash sales with larger quantities of futures. The reasoning is that if it is desirable to replace 5,000 bushels of cash corn with 5,000 of futures, then it is even better to replace it with 25,000. To do so is to leave the farm business and become a speculator.

Positions in futures must be opposite cash position. If the farmer is trying to establish a price for deferred delivery of a growing or stored crop, he is long cash and therefore must be short futures. If he is long futures, he is increasing his risk and trading in futures in a way that is not related to the farm business. If he has need for additional feed supplies, he is short cash and should therefore be long futures.

The third type or error is the failure to close out both the cash and the futures transaction simultaneously. Most people are reluctant to take a loss on futures. Suppose that a farmer is long the crop that he has in storage and short futures against it and the level of price goes up. He has made money on the cash and lost on the futures. The net of the change may be meeting his target price exactly, but when he sells cash he is tempted to stay short the futures in the hope that it will go back down so that he can retain his cash profits without having to offset part of them with futures losses. He is reluctant to admit that he made a mistake when he priced his cash grain forward instead of staying long. He must learn to live with his decisions in the same way that he does if he sells the actual cash grain too soon. When he prices a growing or stored crop forward by selling futures, he is working with basis and is no longer concerned with changes in the level of price.

The fourth type of error is to trade in and out. We have described some situations in which farmers can wisely reverse positions taken in futures as they change their minds about the future course of prices. There is always the temptation to overdo this reversal. Suppose that a farmer prices a growing crop forward by selling futures. The price goes down and even though he thinks it will finally go lower, he expects some short-term recovery. He is tempted to take a quick profit, expecting to sell again when the price recovers. If he does so, he is becoming a short-term trader, something that most farmers are not qualified to do. One of the most difficult aspects of futures trading is to resist taking a quick profit.

From the several types of errors it is clear that farmers should develop a careful plan and stick with it except as they have a very good reason to change, and further that they should ration themselves to one change of mind.

Appendix Table 1.--Corn: Weekly Prices, Cash,[a] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
		1955 Crop			
1955					
April 4	122	138 1/8		16 1/8	
11	120	136 1/2		16 1/2	
18	122	138 3/4		16 3/4	
25	122	138 1/8		16 1/8	
May 2	121	137 7/8		16 7/8	
9	123	140 1/8		16 7/8	
16	123	138 1/2		15 1/2	
23	122	138 3/8		16 3/8	
31	119 1/2	135 3/4		16 1/4	
June 6	117	133 3/4		16 3/4	
13	117 1/2	134		16 1/2	
20	116 1/2	133 3/8		16 7/8	
27	117	133 7/8		16 7/8	
July 5	117 1/2	134 1/2		17	
11	115 1/2	133 1/8		17 5/8	
18	111	129 7/8		18 7/8	
25	108 1/2	127 1/2		19	
Aug. 1	110	129 1/2		19 1/2	
8	107	126 5/8		19 5/8	
15	104 1/2	124 1/4		19 3/4	
22	107	128 1/8		21 1/8	
29	107 1/2	128 1/8	134 5/8	20 5/8	6 1/2
Sept. 6	108 1/2	128 1/2	135 1/2	20	7
12	108 1/2	128	135 5/8	19 1/2	7 5/8
19	111 1/2	130 3/4	139	19 1/4	9 3/4
26	117	136 1/2	145	19 1/2	8 1/2
Oct. 3	113 1/2	131 7/8	140 1/2	18 3/8	8 5/8
10	113	131	139 1/4	18	8 1/4
17	106	127 7/8	136 1/2	21 7/8	8 5/8
24	100 1/2	125	134 1/8	24 1/2	9 1/8
31	106	128 1/2	138 1/8	22 1/2	9 5/8
Nov. 7	108 1/2	129 1/2	139 3/4	21	10 1/8
14	105	124 3/4	135 1/4	19 3/4	10 1/2
21	103 1/2	125 3/8	136 1/4	21 7/8	10 7/8
28	107 1/2	125	136	17 1/2	11
Dec. 5	115 1/2	127	136 1/2	21	9 1/2
12	116 1/2	127	137 1/8	20 5/8	10 1/8
19	114	124 1/2	135 1/8	21 1/5	10 5/8
27	114		134 5/8	20 5/8	
1956					
Jan. 3	114		134 5/8	20 5/8	
9	114		136 3/4	22 3/4	
16	113 1/2		136 1/2	23	
23	114		137 1/8	23 1/8	
30	114		137	23	
Feb. 6	115 1/2		138 3/4	23 1/4	
13	116 1/2		137 7/8	21 3/8	
20	118		138 1/2	20 1/2	
27	118		137 1/2	19 1/2	
March 5	118 1/2		137 1/4	18 3/4	
12	119		138 1/4	19 1/4	
19	122		141 3/8	19 3/8	
26	126		144 7/8	18 7/8	
April 2	129		147 1/4	18 1/4	
9	134		149 3/4	15 3/4	
16	135		150 1/4	15 1/4	
23	142		155 7/8	13 7/8	
30	141 1/2		154 7/8	13 3/8	
May 7	143 1/2		156 1/4	12 3/4	
14	142		154 1/4	12 1/4	
21	140 1/2		151	10 1/2	
28	139		147 3/4	8 3/4	

Appendix Table 1.--Corn: Weekly Prices, Cash,[a/] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
June 4	142 1/2		149 7/8	7 3/8	
11	144 1/2		152 7/8	8 3/8	
18	143 1/2		149 3/4	6 1/4	
25	144 1/2		149 1/2	5	
July 2	144		148 5/8	4 5/8	
9	144 1/2		149	4 1/2	
16	146		151 1/2	5 1/2	

1956 Crop

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
1956					
April 4	120	142 7/8		22 7/8	
11	122	144 1/2		22 1/2	
18	124	143 5/8		19 5/8	
25	123	143 1/4		20 1/4	
May 2	122	142 1/8		20 1/8	
9	121	141 1/4		20 1/4	
16	118	137 3/8		19 3/8	
23	119	138 1/8		19 1/8	
31	119	136 1/2		17 1/2	
June 6	119	138 3/4		19 3/4	
13	122	142 1/2		20 1/2	
20	119	138 5/8		19 5/8	
27	119	137 7/8		18 7/8	
July 5	117	136		19	
11	118	137 1/2		19 1/2	
18	120	139 1/2		19 1/2	
25	117	137		20	
Aug. 1	118	138 3/8		20 3/8	
8	118	138 3/4		20 3/4	
15	120 1/2	142 5/8		22 1/8	
22	117	139 1/8		22 1/8	
29	116	138 3/4	149	22 3/4	10 1/4
Sept. 6	117	139 1/8	149 1/2	22 1/8	10 3/8
12	115 1/2	137 1/4	147 3/4	21 3/4	10 1/2
19	115 1/2	137 1/2	147 1/4	22	9 3/4
26	115 1/2	138 7/8	148 3/8	23 3/8	9 1/2
Oct. 3	117	138	147 1/2	21	9 1/2
10	112 1/2	135 5/8	145 3/8	23 1/8	9 3/4
17	113 1/2	135 3/4	146 1/2	22 1/4	10 3/4
24	116 1/2	137 5/8	146 3/8	21 1/8	8 3/4
31	120	139 1/2	148 1/2	19 1/2	9
Nov. 7	119 1/2	137 1/2	146 3/4	18	9 1/4
14	123	136 3/4	148 7/8	13 3/4	12 1/8
21	124 1/2	138 1/4	146 3/4	13 3/4	8 1/2
28	126	137 3/4	145 3/4	11 3/4	8
Dec. 5	125	134 3/4	144 5/8	19 5/8	9 7/8
12	125	134 1/8	143 7/8	18 7/8	9 3/4
19	122	131	141	19	10
26	122		141	19	
1957					
Jan. 2	122		140 7/8	18 7/8	
9	122		140 1/2	18 1/2	
16	122		142 1/4	20 1/4	
23	121 1/2		140 1/4	18 3/4	
30	121		139 5/8	18 5/8	
Feb. 6	114		135 1/2	21 1/2	
13	116		136	20	
20	118		137 5/8	19 5/8	
27	116		135 1/4	19 1/4	
March 5	118 1/2		137 1/2	19	
12	119		138 1/8	19	
19	116		134 5/8	18 5/8	
26	117 1/2		135 5/8	18 1/8	

Appendix Table 1.--Corn: Weekly Prices, Cash,[a] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
April 2	116		133 1/8	17 1/8	
9	118		134	16	
16	118		134 1/2	16 1/2	
23	117 1/2		132 3/4	15 1/4	
30	118 1/2		131 7/8	13 3/8	
May 7	119 1/2		132 3/8	12 7/8	
14	120		133	13	
21	122		133 7/8	11 7/8	
28	121		130 3/4	9 3/4	
June 4	119 1/2		127 3/4	8 1/4	
11	119 1/2		127 3/4	8 1/4	
18	119		128 1/8	9 1/8	
25	120		129 7/8	9 7/8	
July 2	120		131	11	
9	121 1/2		131 3/3	9 7/8	
16	122		128 3/4	6 3/4	

1957 Crop

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
1957					
April 4	106	127 1/2		21 1/2	
11	108	129 3/8		21 3/8	
18	107	128 7/8		21 7/8	
25	105	126 1/2		21 1/2	
May 2	104	125 1/4		21 1/4	
9	104	125 1/8		21 1/8	
16	105	127 1/4		22 1/4	
23	106 1/2	128 1/8		21 5/8	
29	104	125 3/8		21 1/4	
June 6	100 1/2	121 5/8		21 1/8	
13	102	123 3/4		21 3/4	
20	102	123 3/8		21 3/8	
27	105	126 5/8		21 5/8	
July 5	107	128 1/4		21 1/4	
11	107	128 1/4		21 1/4	
18	109	130		21	
25	108	128 1/2		20 1/2	
Aug. 1	105 1/2	125 7/8		20 3/8	
8	107	127 3/8		20 3/8	
15	104 1/2	125 5/8		21 1/8	
22	107	127 1/4		20 1/4	
29	102 1/2	123 1/8	133 1/4	20 5/8	10 1/8
Sept. 5	104 1/2	125 1/4	135 1/8	20 3/4	9 7/8
12	103	123 3/8	133 1/8	20 3/8	9 3/4
19	102 1/2	123 1/4	133 1/2	20 3/4	10 1/4
26	99	120	130 3/4	21	10 3/4
Oct. 3	100	120 3/4	130 3/8	20 3/4	9 5/8
10	100	121	130 3/8	21	9 3/8
17	100 1/2	121 5/8	131 1/2	21 1/8	9 7/8
24	101	121 3/8	130 3/8	20 3/8	9
31	99	118 1/4	127 7/8	19 1/4	9 5/8
Nov. 7	100	117 3/4	128 1/8	17 3/4	10 3/8
14	100	118 5/8	127 3/8	18 5/8	8 3/4
21	105	117 3/4	127	12 3/4	9 1/4
29	105	116 3/4	125 3/4	11 3/4	9
Dec. 5	109	119 5/8	125 3/4	16 3/4	6 1/8
12	108	117 1/2	126	18	8 1/2
19	105	112 1/4	123 1/2	18 1/2	11 1/4
26	104		121 1/2	17 1/2	
1958					
Jan. 2	105		121 3/4	16 3/4	
9	105 1/2		121	15 1/2	
16	103		118 7/8	15 7/8	
23	101		117 1/8	16 1/8	
30	103 1/2		116	12 1/2	

Appendix Table 1.--Corn: Weekly Prices, Cash,[a/] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
Feb. 6	104 1/2		116 7/8	12 3/8	
13	105		116 7/8	11 7/8	
20	106		118	12	
27	108		119 7/8	11 7/8	
March 6	110 1/2		120 3/4	10 1/4	
13	110		121 1/8	11 1/8	
20	109		118 7/8	9 7/8	
27	110 1/2		120	9 1/2	
April 3	113		122 3/8	9 3/8	
10	120		126 1/2	6 1/2	
17	122		126 1/2	4 1/2	
24	121		125 1/8	4 1/8	
May 1	120 1/2		125 3/8	4 7/8	
8	120		125 3/8	5 3/8	
15	120		124 3/4	4 3/4	
22	123		128 5/8	5 5/8	
29	123		130	7	
June 5	121		129 3/4	8 3/4	
12	124		132	8	
19	126 1/2		132	5 1/2	
26	124		135	11	
July 3	122		132 1/4	10 1/4	
10	121		130 1/2	9 1/2	
17	123 1/2		134 1/4	10 3/4	
		1958 Crop			
1958					
April 3	97	118 5/8		21 5/8	
11	100	119 1/8		19 1/8	
18	99	120 5/8		21 5/8	
25	98 1/2	119 1/2		21	
May 2	99	119 5/8		20 5/8	
9	97	117 3/4		20 3/4	
16	97	117 3/8		20 3/8	
23	97	118 3/8		21 3/8	
29	102	122 7/8		20 7/8	
June 6	100	121 1/8		21 1/8	
13	99	120		21	
20	100	120 1/8		20 1/8	
27	101	121 1/8		20 1/8	
July 3	101	120 3/4		19 3/4	
11	100	120 1/4		20 1/4	
18	105 1/2	125 7/8		20 3/8	
25	101	121 1/8		20 1/8	
Aug. 1	102	122 1/8		20 1/8	
8	101	119 3/8		18 3/8	
15	97 1/2	117 1/8		19 5/8	
22	96	115 7/8		19 7/8	
29	98	117 7/8	126 7/8	19 7/8	9
Sept. 5	97	117	125 5/8	20	8 5/8
12	96	115 5/8	125	19 5/8	9 5/8
19	95	115 1/8	124 3/8	20	9 1/4
26	97	115	124 7/8	18	9 7/8
Oct. 3	98	113 1/2	122 1/2	15 1/2	9
10	96	113 3/8	122 3/8	17 3/8	9
17	95	110 5/8	120 1/2	15 5/8	9 7/8
24	93 1/2	109 3/8	119 1/2	15 7/8	10 1/8
31	94 1/2	110 1/4	119 3/4	15 3/4	9 1/2
Nov. 7	97 1/2	112 1/2	120 7/8	15	8 3/8
14	99	112 7/8	120	13 7/8	7 3/8
21	103 1/2	114 5/8	120 1/4	11 1/8	5 5/8
28	104	113 1/8	120 1/2	9 1/8	7 3/8

Appendix Table 1.--Corn: Weekly Prices, Cash,[a] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
Dec. 5	105	114 5/8	120	15	5 3/8
12	104 1/2	114 1/2	118 3/4	14 1/4	4 1/4
19	104 1/2	112 1/2	118 1/8	13 7/8	5 5/8
24	103 1/2		116 1/2	13	
1959					
Jan. 2	103 1/2		116 3/4	13 1/4	
9	104		116 1/2	12 1/2	
16	104		115 5/8	11 5/8	
23	104 1/2		116 3/4	12 1/4	
30	104		115 1/2	11 1/2	
Feb. 6	104 1/2		116 3/8	11 7/8	
13	105		116 7/8	11 7/8	
20	105		117 3/8	12 3/8	
27	105		119 1/8	14 1/8	
March 6	105		119 3/8	14 3/8	
13	106 1/2		119 5/8	13 1/8	
20	107 1/2		119 1/4	11 3/4	
26	109		120 7/8	11 7/8	
April 3	112 1/2		123 7/8	11 3/8	
10	115 1/2		125 1/2	10	
17	116		124 7/8	8 7/8	
24	115		124 1/2	9 1/2	
May 1	116 1/2		125 1/2	9	
8	116 1/2		124 5/8	8 1/8	
15	117 1/2		126 1/4	8 3/4	
22	117		126 1/4	9 1/4	
29	116		124 5/8	8 5/8	
June 5	116 1/2		125 1/2	9	
12	118		126 3/8	8 3/8	
19	118 1/2		126 3/8	7 7/8	
26	118		126	8	
July 2	117		124 3/4	7 3/4	
10	116		123 3/8	7 3/8	
17	117		125 3/8	8 3/8	

1959 Crop

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
1959					
April 3	95		114 3/4	19 3/4	
10	95		114 3/4	19 3/4	
17	95		115 5/8	20 5/8	
24	95		114 3/4	19 3/4	
May 1	96		115 1/2	19 1/2	
8	95 1/2		115 3/8	19 7/8	
15	96		115 3/4	19 3/4	
22	95		115 3/8	20 3/8	
29	94		113 3/4	19 3/4	
June 5	93 1/2		113 1/2	20	
12	94		113 5/8	19 5/8	
19	96		115 7/8	19 7/8	
26	98		115	17	
July 2	97		114 1/4	17 1/4	
10	99		115	16	
17	98		114 5/8	16 5/8	
24	98		113 7/8	15 7/8	
31	98 1/2		113 7/8	15 3/8	
Aug. 7	97		112 3/8	15 3/8	
14	97 1/2		112 1/2	15	
21	97		112 3/8	15 3/8	
28	97	118 7/8	111 3/4	14 3/4	7 1/8
Sept. 4	96	119 1/4	112 1/4	16 1/4	7
11	94	117 3/4	110 5/8	16 5/8	7 1/8
18	94	117 1/2	109 5/8	15 5/8	7 7/8
25	94	117 3/4	109 7/8	15 7/8	7 7/8

Appendix Table 1.--Corn: Weekly Prices, Cash,[a] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
Oct. 2	94	110	118 1/4	16	8 1/4
9	94	109 7/8	118 1/8	15 7/8	8 1/4
16	94	108 1/8	117 1/2	14 1/8	9 3/8
23	95	109 5/8	118 3/8	14 5/8	8 3/4
30	97	110	118 1/2	13	8 1/2
Nov. 6	104	113	120 5/8	9	7 5/8
13	101	112 7/8	120 7/8	11 7/8	8
20	101 1/2	110 1/2	118 1/2	9	8
27	100	110 1/8	118	10 1/8	7 7/8
Dec. 4	100	109 3/4	118 3/8	18 3/8	8 5/8
11	100	109 3/4	118 1/4	18 1/4	8 1/2
18	100	108 7/8	118 1/8	18 1/8	9 1/4
24	101		118	17	
31	104		118 3/4	14 3/4	
1960					
Jan. 8	105		119 1/4	14 1/4	
15	106		119 1/2	13 1/2	
22	106		119 5/8	13 5/8	
29	105 1/2		119 1/4	13 3/4	
Feb. 5	106		119 1/8	13 1/8	
12	105 1/2		119	13 1/2	
19	103 1/2		118 1/4	14 3/4	
26	104		118 7/8	14 7/8	
March 4	105 1/2		119 3/8	13 7/8	
11	106 1/2		119 1/4	12 3/4	
18	107		119	12	
25	109		120	11	
April 1	111		121 7/8	10 7/8	
8	110 1/2		121 1/4	10 3/4	
14	111		121 5/8	10 5/8	
22	111		121 1/2	10 1/2	
29	110		121 1/8	11 1/8	
May 6	109 1/2		120 5/8	11 1/8	
13	110		120 5/8	10 5/8	
20	111		121 7/8	10 7/8	
27	111 1/2		121 1/2	10	
June 3	111 1/2		120	8 1/2	
10	110		118 5/8	8 5/8	
17	110		118 1/4	8 1/4	
24	108		116 1/8	8 1/8	
July 1	109		116 1/2	7 1/2	
8	109 1/2		118 5/8	9 1/8	
15	109		117	8	

Date	East-central Illinois farm price	1960 Crop Dec.	1960 Crop July	1960 Crop Basis	Difference
1960					
April 4	95	110 7/8		15 7/8	
11	95	110 1/4		15 1/4	
18	95	110 1/4		15 1/4	
25	95	110 5/8		15 5/8	
May 2	94	110 3/4		16 3/4	
9	94	111 1/2		17 1/2	
16	95	112 3/4		17 3/4	
23	97	113 5/8		16 5/8	
31	97	113 1/4		16 1/4	
June 6	95	112 3/8		17 3/8	
13	95	111 5/8		16 5/8	
20	95	112 1/4		17 1/4	
27	95 1/2	112 1/8		16 5/8	
July 5	97	114		17	
11	96	113 1/4		17 1/4	
18	96	111 7/8		15 7/8	
25	97	112 1/4		15 1/4	

Appendix Table 1.--Corn: Weekly Prices, Cash,[a] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
Aug. 1	98	113 1/4		15 1/4	
8	95	111 1/8		16 1/8	
15	95	110 1/4		15 1/4	
22	99	110 1/4		11 1/4	
29	96 1/2	110 3/4	118 1/4	14 1/4	7 1/2
Sept. 6	96	110 3/8	118 3/8	14 3/8	8
12	96	110	118 1/4	14	8 1/4
19	95 1/2	109 1/4	118 1/8	13 3/4	8 7/8
26	95	108 7/8	118 1/2	13 7/8	9 5/8
Oct. 3	96	108 7/8	118 5/8	12 7/8	9 3/4
10	95	108 3/4	117 3/4	9	
17	94	107 7/8	117 3/8	13 7/8	9 1/2
24	93	108 3/4	118 5/8	15 3/4	9 7/8
31	91 1/2	107 3/4	117 5/8	16 1/4	9 7/8
Nov. 7	90	107 5/8	118 1/4	17 5/8	10 5/8
14	85	103 5/8	115 5/8	18 5/8	12
21	79	101	112 3/4	22	11 3/4
28	84	102 5/8	114 3/4	18 5/8	12 1/8
Dec. 5	90	104	115 5/8	25 5/8	11 5/8
12	94	101 3/4	115 7/8	21 7/8	14 1/8
19	96	100 1/2	114 1/2	18 1/2	14
27	99		115 3/4	16 3/4	
1961					
Jan. 3	99 1/2		117 1/8	17 5/8	
9	100		118 5/8	18 5/8	
16	100		119	19	
23	101 1/2		118 1/2	17	
30	105		123 5/8	18 5/8	
Feb. 6	108 1/2		124	15 1/2	
13	105		122 3/4	17 3/4	
20	103		120 7/8	17 7/8	
27	103		121 1/2	18 1/2	

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
March 6	105		123 1/4	18 1/4	
13	105		121 1/4	16 1/4	
20	103		118 1/2	15 1/2	
27	101		117 1/4	16 1/4	
April 3	95 1/2		112 1/4	16 3/4	
10	98		112	14	
17	100		112 5/8	12 5/8	
24	103		116 1/2	13 1/2	
May 1	102		119 1/8	17	
8	102 1/2		116	13 1/2	
15	104		117 5/8	13 5/8	
22	102		114	12	
29	103		115 5/8	12 5/8	
June 5	104 1/2		117 1/4	12 3/4	
12	101 1/2		114	12 1/2	
19	100 1/2		112 3/8	11 7/8	
26	100 1/2		112 7/8	12 3/8	
July 3	102 1/2		114	11 1/2	
10	103		114 3/8	11 3/8	
17	103 1/2		114 1/2	11	
		Mean 1955-60 Crops			
April 4	105 3/4	125 1/2		19 5/8	
11	106 3/4	125 3/4		19 1/8	
18	107	126 1/4		19 1/4	
25	106 3/8	125 3/8		19 1/8	
May 2	106	125 1/8		19 1/8	
9	105 3/4	125 1/8		19 3/8	
16	105 5/8	124 3/4		19 1/8	
23	106 1/8	125 1/4		19 1/4	
31	105 7/8	124 5/8		18 5/8	

Appendix Table 1.--Corn: Weekly Prices, Cash,[a] December and July Futures, Basis, and December-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Dec.	July	Basis	Difference
June 6	104 1/8	123 1/2		19 3/8	
13	104 7/8	124 1/4		19 3/8	
20	104	123 1/2		19 1/2	
27	105 7/8	124 3/8		18 1/2	
July 5	106	124 5/8		18 1/2	
11	105 7/8	124 1/2		18 5/8	
18	106 1/2	125 1/4		18 3/4	
25	104 7/8	123 1/2		18 1/2	
Aug. 1	105 1/4	123 3/4		18 1/2	
8	104 1/8	122 5/8		18 3/8	
15	103 1/4	122		18 3/4	
22	103 7/8	122 1/8		18 3/8	
29	102 7/8	121 3/4	130 1/8	18 3/4	8 3/8
Sept. 6	103 1/8	122 1/8	130 1/2	18 7/8	8 1/2
12	102 1/8	120 3/4	129 5/8	18 5/8	8 7/8
19	102 3/8	120 7/8	130	18 1/2	9 1/4
26	102 7/8	121 1/2	131	18 5/8	9 3/8
Oct. 3	103 1/8	120 1/2	129 5/8	17 3/8	9 1/4
10	101 3/4	120	128 7/8	18 1/8	8 7/8
17	100 1/2	118 5/8	128 1/4	18 1/8	9 5/8
24	99 7/8	118 5/8	127 7/8	18 3/4	9 1/4
31	101 3/8	119	128 3/8	17 3/4	9 3/8
Nov. 7	103 1/4	119 5/8	129 1/8	16 3/8	9 3/8
14	102 1/8	118 1/4	128	16 1/8	9 3/4
21	102 7/8	117 7/8	126 7/8	15 1/8	9
28	104 3/8	117 1/2	126 3/4	13 1/8	9 1/4
Dec. 5	107 3/8	118 1/4	126 3/4	19 3/8	8 1/2
12	108	117 3/8	126 5/8	18 5/8	9 1/4
19	106 7/8	114 7/8	125	18 1/8	10 1/8
27	107 1/4		124 1/2	17 1/4	
Jan. 3	108		125	17	
9	108 3/8		125 3/8	17	
16	108 1/8		125 1/4	17 1/8	
23	108 3/8		125	16 5/8	
30	108 7/8		125 1/8	16 3/8	
Feb. 6	108 7/8		125 1/8	16 1/4	
13	108 7/8		124 7/8	16	
20	108 7/8		125 1/8	16 1/4	
27	109		125 3/8	16 3/8	
March 5	110 1/2		126 1/4	15 3/4	
12	111		126 1/4	15 1/4	
19	110 3/4		125 1/4	14 1/2	
26	112 1/8		126 3/8	14 1/4	
April 2	112 7/8		126 3/4	14	
9	116		128 1/8	12 1/8	
16	117 1/8		128 3/8	11 3/8	
23	118 1/4		129 3/8	11 1/8	
30	118 1/8		129 5/8	11 1/2	
May 7	118 5/8		129 1/8	10 1/2	
14	118 7/8		129 3/8	10 1/2	
21	119 1/4		129 1/4	10	
28	118 7/8		128 3/8	9 1/2	
June 4	119 1/4		128 3/8	9 1/8	
11	119 5/8		128 5/8	9	
18	119 5/8		127 3/4	8 1/8	
25	119 1/8		128 1/4	9 1/8	
July 2	119 1/8		127 7/8	8 3/4	
9	119 1/4		127 7/8	8 5/8	
16	120 1/8		128 1/2	8 3/8	

a/ Bid to farmers at local elevators in east-central Illinois.

Appenxix Table 2.--Soybeans: Weekly Prices, Cash,[a/] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
		1955 Crop			
1955					
April 4	219	236		17	
11	215	231 3/4		16 3/4	
18	216	231 1/2		15 1/2	
25	215	233 1/2		18 1/2	
May 2	220	232 1/4		12 1/4	
9	220	237 1/2		17 1/2	
16	217	235 3/4		18 3/4	
23	216	233 3/4		17 3/4	
31	215 1/2	233 1/4		17 3/4	
June 6	210	227 1/4		17 1/4	
13	214 1/2	231 1/4		16 3/4	
20	214	231		17	
27	213	229		16	
July 5	212 1/2	228 1/4		15 3/4	
11	208 1/2	225 1/4		16 3/4	
18	206	222 1/2		16 1/2	
25	203	220		17	
Aug. 1	204 1/2	221 1/4		16 3/4	
8	204	221 1/4		17 1/4	
15	201	217 3/4		16 3/4	
22	205	221 1/2		16 1/2	
29	202	219 1/4		17 1/4	
Sept. 6	202	219		17	
12	203 1/2	218 7/8		15 3/8	
19	206 1/2	218 3/4		12 1/4	
26	233	245 3/4		12 3/4	
Oct. 3	222 1/2	237	244	14 1/2	7
10	222 1/2	236 1/2	243 1/2	14	7
17	215	232 1/2	238 1/2	17 1/2	6
24	208	229 1/4	236	21 1/4	6 3/4
31	213 1/2	236 1/2	241 3/4	23	5 1/4
Nov. 7	216	235 3/4	240 1/2	24 1/2	4 3/4
14	215	235 1/2	239 1/2	24 1/2	4
21	214		236 7/8	22 7/8	
28	213		234 1/4	21 1/4	
Dec. 5	220 1/2		236 1/2	16	
12	222		238 1/2	16 1/2	
19	222		238	16	
27	225		241 1/2	16 1/2	
1956					
Jan. 3	225 1/2		242 3/4	17 1/4	
9	227 1/2		248 1/4	20 3/4	
16	230		248 1/2	18 1/2	
23	230		247 1/4	17 1/4	
30	233 1/2		252 3/4	19 1/4	
Feb. 6	236 1/2		253 3/4	17 1/4	
13	236		254	18	
20	244		266 3/4	22 3/4	
27	249 1/2		269 1/4	19 3/4	
March 5	246 1/2		264 1/2	18	
12	249 1/2		266 1/2	17	
19	248		264	16	
26	255		270 3/4	15 3/4	
April 2	262		278	16	
9	271		285	14	
16	281		295 1/2	14 1/2	
23	291		306 1/4	15 1/4	
30	310		324 1/2	14 1/2	
May 7	312		324 3/4	12 3/4	
14	311 1/2		324 1/4	12 3/4	
21	310		322	12	
28	288 1/2		301	12 1/2	

Appendix Table 2.--Soybeans: Weekly Prices, Cash,[a/] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
June 4	291 1/2		303	11 1/2	
11	299		313 1/2	14 1/2	
18	280		295 3/4	15 3/4	
25	284 1/2		299 3/4	15 1/4	
July 2	258 1/2		274 1/4	15 3/4	
9	257		272 1/4	15 1/4	
16	251		266 1/4	15 1/4	

1956 Crop

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
1956					
April 4	225	246 3/4		21 1/2	
11	231	252 3/4		21 3/4	
18	229	248 1/4		19 1/4	
25	238	258 1/2		20 1/2	
May 2	230	256 1/4		26 1/4	
9	233	254 1/2		21 1/2	
16	235	255		20	
23	231	252 3/4		21 3/4	
31	233	252		19	
June 6	235	260		25	
13	240	266		26	
20	235 1/2	260		24 1/2	
27	232	256		24	
July 5	226	245 1/4		19 1/4	
11	226	256 1/4		19 1/4	
18	226 1/2	256 3/4		19 1/4	
25	218	237		19	
Aug. 1	219	237 3/4		18 3/4	
8	220 1/2	239		18 1/2	
15	224 1/2	242 3/4		18 1/4	
22	218 1/2	237 1/2		19	
29	216	235 3/4		19 3/4	
Sept. 6	213	232 1/4		19 1/4	
12	212 1/2	234		21 1/2	
19	210 1/2	235 1/2		25 1/2	
26	209 1/2	236 1/2		25	
Oct. 3	215	238 3/4	247 1/4	23 3/4	8 1/2
10	211 1/2	238	248 1/4	26 1/2	10 1/4
17	214 1/2	241 1/2	254 1/4	27	12 3/4
24	219 1/2	243	255	23 1/2	12
31	228	249 1/4	260 1/4	21 1/4	11
Nov. 7	228	247	257	29	10
14	238 1/2	255 1/4	261 1/4	22 3/4	6
21	241		258 1/2	17 1/2	
28	245		262 3/4	17 3/4	
Dec. 5	236		255 1/4	19 1/4	
12	238 1/2		253 3/4	15 1/4	
19	233		249 1/4	16 1/4	
26	236		249 5/8	13 5/8	
1957					
Jan. 2	236 1/2		251 1/2	15	
9	237 1/2		253 3/8	16 3/8	
16	242 1/2		256 1/2	14	
23	239		251 3/8	12 3/8	
30	238 1/2		247 1/2	9	
Feb. 6	232 1/2		244	11 1/2	
13	231 1/2		243	11 1/2	
20	228 1/2		238 3/4	10 1/4	
27	232		240 5/8	8 5/8	
March 5	233		243 1/2	10 1/2	
12	231 1/2		239 3/4	8 1/4	
19	229 1/2		236 3/4	7 1/4	
26	230 1/2		237 1/8	6 5/8	

Appendix Table 2.--Soybeans: Weekly Prices, Cash,[a/] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
April 2	230		237 1/2	7 1/2	
9	231 1/2		240	8 1/2	
16	226		237 3/8	11 3/8	
23	224 1/2		235	10 1/2	
30	226 1/2		237 3/8	10 7/8	
May 7	226 1/2		237 1/8	10 3/8	
14	226		235 5/8	9 5/8	
21	222		235 1/8	13 1/8	
28	223		235 3/4	12 3/4	
June 4	222		234 7/8	12 7/8	
11	221		232 1/8	11 1/8	
18	221 1/2		231 1/2	10	
25	222		233 5/8	11 5/8	
July 2	224 1/2		238 3/8	13 7/8	
9	227 1/2		242 1/4	14 3/4	
16	230		247	17	

1957 Crop

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
1957					
April 4	205	227		22	
11	206	228		22	
18	205	225 3/8		20 3/8	
25	203	224 1/2		21 1/2	
May 2	202	223 5/8		21 5/8	
9	203	224 3/8		21 3/8	
16	203	224 1/2		21 1/2	
23	203	224 3/8		21 3/8	
31	201 1/2	222 5/8		21 1/8	
June 6	200	220 3/4		20 3/4	
13	200	221 1/4		21 1/4	
20	202	223 1/8		21 1/8	
27	205	227 1/4		22 1/4	
July 5	208	229 1/2		21 1/2	
11	213	234 1/2		21 1/2	
18	223	244 3/4		21 3/4	
25	217	238 1/4		21 1/4	
Aug. 1	215	236		21	
8	218 1/2	239		20 1/2	
15	220 1/2	241		20 1/2	
22	217 1/2	237 3/4		20 1/4	
29	217 1/2	237 3/4		20 1/4	
Sept. 5	216	236 3/4		20 3/4	
12	214 1/2	234 3/8		19 7/8	
19	212	232 5/8		20 5/8	
26	208	229 1/4		21 1/4	
Oct. 3	207	227 1/8	234	20 1/8	6 7/8
10	212	230 1/2	239 1/8	18 1/2	8 5/8
17	212 1/2	233 3/8	242	20 7/8	8 5/8
24	209	228 3/4	237	19 3/4	8 1/4
31	208	226 1/2	236 1/4	18 1/2	9 3/4
Nov. 7	212	229 1/8	239 3/8	27 3/8	10 1/4
14	213	227	236 3/8	23 3/8	9 3/8
21	217		238 7/8	21 7/8	
29	217		238 1/8	21 1/8	
Dec. 5	217 1/2		237 3/4	20 1/4	
12	215		233 1/8	18 1/8	
19	214		232 5/8	18 5/8	
26	212		230	18	
1958					
Jan. 2	212 1/2		229 1/2	17	
9	213 1/2		230 1/4	16 3/4	
16	214		230 1/2	16 1/2	
23	214		229 1/8	15 1/8	
30	212		225 1/4	13 1/4	

Appendix Table 2.--Soybeans: Weekly Prices, Cash,[a/] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
Feb. 6	213 1/2		227 1/2	14	
13	213		226 3/4	13 3/4	
20	215		228 5/8	13 5/8	
27	214 1/2		227	12 1/2	
March 6	217		227 3/8	10 3/8	
13	217 1/2		228 1/8	10 5/8	
20	217		227 7/8	10 7/8	
27	218 1/2		227 5/8	9 1/8	
April 3	219 1/2		228 3/4	9 1/4	
10	222		233	11	
17	222 1/2		233 5/8	11 1/8	
24	219 1/2		230 1/2	11	
May 1	220		229 5/8	9 5/8	
8	220		227 7/8	7 7/8	
15	219		227		
22	220		228 1/8	8 1/8	
29	221		229 1/2	8 1/2	
June 5	219		226 5/8	7 5/8	
12	220		227 1/2	7 1/2	
19	218 1/2		224 1/4	5 3/4	
26	219		224 7/8	5 7/8	
July 3	219		224 3/8	5 3/8	
10	219		224 1/8	5 1/8	
17	226		235	9	

1958 Crop

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
1958					
April 3	198 1/2	219 3/4		21 1/4	
11	203	223 3/8		20 3/8	
18	206	226 1/4		20 1/4	
25	201	221 3/4		20 3/4	
May 2	202 1/2	222 1/2		20	
9	201	221 3/4		20 3/4	
16	201	221 3/8		20 3/8	
23	202	222 1/4		20 1/4	
29	205	225 1/2		20 1/2	
June 6	201	221 1/4		20 1/4	
13	203	222 3/4		19 3/4	
20	202	221 3/4		19 3/4	
27	202 1/2	222		19 1/2	
July 3	202	221 5/8		19 5/8	
11	202	222		20	
18	211	230 3/4		19 3/4	
25	204 1/2	224 1/4		19 3/4	
Aug. 1	206	224 5/8		18 5/8	
8	202	222 3/8		20 3/8	
15	202	222 1/8		20 1/8	
22	200	219 1/4		19 1/4	
29	203	223		20	
Sept. 5	202	221 5/8		19 5/8	
12	201	220 5/8		19 5/8	
19	200	218 3/4		18 3/4	
26	200	219 1/2		19 1/2	
Oct. 3	199	216	225 1/2	17	9 1/2
10	201	216 1/8	225 3/8	15 1/8	9 1/4
17	197 1/4	213 1/2	223 1/2	16	10
24	194	210 7/8	222 5/8	16 7/8	11 3/4
31	194	210 3/4	223	16 3/4	12 1/4
Nov. 7	198	214	226 1/8	28 1/8	12 1/8
14	198	213 1/4	225	27	11 3/4
21	201		224 1/4	23 1/4	
28	201		223	22	

Appendix Table 2.--Soybeans: Weekly Prices, Cash,[2/] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
Dec. 5	203		223 7/8	20 7/8	
12	206		222	16	
19	209		222	13	
24	209		219 1/2	10 1/2	
1959					
Jan. 2	207		218 7/8	11 7/8	
9	209		218	9	
16	210 1/2		219 1/8	8 5/8	
23	211 1/2		220	8 1/2	
30	210 1/2		219 3/4	9 1/4	
Feb. 6	211 1/2		220 1/2	9	
13	212		221 1/2	9 1/2	
20	210		221 1/8	11 1/8	
27	212		224 3/4	12 3/4	
March 6	212		224 1/8	12 1/8	
13	213		225 1/2	12 1/2	
20	213 1/2		225 5/8	12 1/8	
26	214 1/2		226 3/4	12 1/4	
April 3	215 1/2		227 1/4	11 3/4	
10	216 1/2		228 1/8	11 5/8	
17	218		228 1/4	10 1/4	
24	219 1/2		228 7/8	9 3/8	
May 1	220		228 7/8	8 7/8	
8	221		229 1/8	8 1/8	
15	220 1/2		229 5/8	9 1/8	
22	219		228 3/4	9 3/4	
29	216		225 3/8	9 3/8	
June 5	215 1/2		224 3/4	9 1/4	
12	217		224 3/4	7 3/4	
19	216 1/2		223 3/8	6 7/8	
26	217		224 1/2	7 1/2	
July 2	217		223 3/4	6 3/4	
10	213		218 7/8	5 7/8	
17	215		220 5/8	5 5/8	

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
			1959 Crop		
1959					
April 3	194		213 5/8	19 5/8	
10	195		214 3/4	19 3/4	
17	193		213	20	
24	192		211 1/4	19 1/4	
May 1	193		211 5/8	18 5/8	
8	193		211 3/4	18 3/4	
15	195		213 7/8	18 7/8	
22	194 1/2		213 1/2	19	
29	193		212 1/8	19 1/8	
June 5	190 1/2		208 7/8	18 3/8	
12	191		209 1/4	18 1/4	
19	193 1/2		212 3/8	18 7/8	
26	193 1/2		212	18 1/2	
July 2	191		210 5/8	19 5/8	
10	194		211 7/8	17 7/8	
17	200		218 3/4	18 3/4	
24	203 1/2		220 3/8	16 7/8	
31	203		220 3/8	17 3/8	
Aug. 7	199		216 3/8	17 3/8	
14	195		213 3/8	18 3/8	
21	195		212 5/8	17 5/8	
28	193		210 5/8	17 5/8	
Sept. 4	194 1/2		212	17 1/2	
11	194		210 1/4	16 1/4	
18	193 1/2		208 1/2	15	
25	191		209	18	

Appendix Table 2.--Soybeans: Weekly Prices, Cash,[a] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
Oct. 2	197	213 3/4	224 1/8	16 3/4	10 3/8
9	199	215 1/2	225 1/2	16 1/2	10
16	199	212 3/4	223 5/8	13 3/4	10 7/8
23	198	214 1/4	225 3/8	16 1/4	11 1/8
30	201	217	228 1/2	16	11 1/2
Nov. 6	209	223 1/4	232	23	8 3/4
13	208	221 1/4	229 1/8	21 1/8	7 7/8
20	206		225	19	
27	207		225 1/2	18 1/2	
Dec. 4	208		228 3/4	20 3/4	
11	204		222 1/2	18 1/2	
18	202		217 1/4	15 1/4	
24	205		218 1/2	13 1/2	
31	206		219 1/4	13 1/4	
1960					
Jan. 8	208		221 5/8	13 5/8	
15	207		218 5/8	11 5/8	
22	208		218 3/4	10 3/4	
29	206		216 5/8	10 5/8	
Feb. 5	205		215 1/8	10 1/8	
12	203 1/2		215	11 1/2	
19	203 1/2		214 5/8	11 1/8	
26	202		213 5/8	11 5/8	
March 4	203		215 1/8	12 1/8	
11	204		216 1/8	12 1/8	
18	205		215 1/2	10 1/2	
25	207 1/2		217	9 1/2	
April 1	212		219 1/2	7 1/2	
8	212		217 1/2	5 1/2	
14	207 1/2		216	8 1/2	
22	207 1/2		215 3/8	7 7/8	
29	206		215 1/2	9 1/2	

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
May 6	207 1/2		215 5/8	8 1/8	
13	206		214 1/8	8 1/8	
20	207 1/2		215 7/8	8 3/8	
27	206 1/2		214 5/8	8 1/8	
June 3	207		214 1/2	7 1/2	
10	205		212	7	
17	204		211	7	
24	204		211 1/8	7 1/8	
July 1	205		213 1/4	8 1/4	
8	205		212 1/2	7 1/2	
15	205		213 1/8	8 1/8	
1960 Crop					
1960					
April 4	188	209 1/8		21 1/8	
11	190	209 1/4		19 1/4	
18	190	209		19	
25	188	208 1/2		20 1/2	
May 2	190	209 3/4		19 3/4	
9	188	208 3/4		20 3/4	
16	190	210 3/8		20 3/8	
23	191	210		21	
31	190	210		20	
June 6	189	209 5/8		20 5/8	
13	189	207 5/8		18 5/8	
20	189	207 3/4		18 3/4	
27	190	208 3/4		18 3/4	
July 5	192	211 3/4		19 3/4	
11	191	210 1/4		19 1/4	
18	193	211		18	
25	195	213 3/8		18 3/8	

Appendix Table 2.--Soybeans: Weekly Prices, Cash,[a/] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
Aug. 1	202	219 1/4		17 1/4	
8	200	217 1/4		17 1/4	
15	200	215 1/2		15 1/2	
22	201 1/2	216 1/8		14 5/8	
29	201	215 7/8		14 7/8	
Sept. 6	201 1/2	216 3/4		15 1/4	
12	201	215 3/8		14 3/8	
19	200	213 3/4		13 3/4	
26	198	212 7/8		14 7/8	
Oct. 3	200	212 7/8	224 1/4	12 7/8	11 3/8
10	201 1/2	213 5/8	225 1/4	12 1/8	11 5/8
17	200 1/2	214 3/8	226	13 7/8	11 5/8
24	199 1/2	216 7/8	229 1/2	17 3/8	12 5/8
31	200 1/2	217 1/4	231	16 3/4	13 3/4
Nov. 7	205	217 1/2	231	26	13 1/2
14	201	231 3/4	226 3/4	25 3/4	13
21	201 1/2		225 1/2	24	
28	203		226	23	
Dec. 5	206		226	20	
12	210		224	14	
19	214		224	10	
27	220		228 3/8	8 3/8	
1961					
Jan. 3	229		242 1/2	13 1/2	
9	232		248 1/2	16 1/2	
16	236		256	20	
23	231 1/2		250	18 1/2	
30	252		271 3/4	19 3/4	
Feb. 6	255 1/2		276	20 1/2	
13	257		277 1/4	20 1/4	
20	262 1/2		281 3/4	19 1/4	
27	290		308	18	

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
March 6	291		309 1/2	18 1/2	
13	273		288	15	
20	285		292	7	
27	296		303 1/2	7 1/2	
April 3	295		302 3/4	7 3/4	
10	310		323	13	
17	305		320 1/8	15 1/8	
24	313		324 1/2	11 1/2	
May 1	318		327 3/4	9 3/4	
8	297		305 1/2	8 1/2	
15	308		311 3/4	3 3/4	
22	294		297 3/4	3 3/4	
29	288		292 3/4	4 3/4	
June 5	295		298 1/4	3 1/4	
12	263		267 1/2	4 1/2	
19	263		267 1/2	4 1/2	
26	254		26 1/4	7 1/4	
July 3	267		275 3/4	8 3/4	
10	260		262	2	
17	254		254 3/4	0 3/4	
		Mean 1955-60 Crops			
April 4	204 7/8	225 3/8		20 3/8	
11	206 5/8	226 5/8		20	
18	206 1/2	225 1/2		19	
25	206 1/8	226 1/4		20 1/8	
May 2	206 1/8	226		19 7/8	
9	206 3/8	226 1/2		20 1/8	
18	206 7/8	226 7/8		20	
23	206 1/8	226 1/4		20 1/8	
31	206 1/4	225 7/8		19 5/8	

Appendix Table 2.--Soybeans: Weekly Prices, Cash,[a] November and July Futures, Basis, and November-July Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	Nov.	July	Basis	Difference
June 6	204 1/4	224 5/8		20 3/8	
13	206 1/4	226 3/8		20 1/8	
20	206	226		20	
27	206	225 7/8		19 7/8	
July 5	205 1/4	224 1/2		19 1/4	
11	205 3/4	224 7/8		19 1/8	
18	209 7/8	228 7/8		19	
25	206 7/8	225 1/2		18 3/4	
Aug. 1	208 1/4	226 5/8		18 1/4	
8	207 3/8	225 7/8		18 1/2	
15	207 3/8	225 3/8		18	
22	205 7/8	223 3/4		17 7/8	
29	205 3/8	223 3/4		18 1/4	
Sept. 6	204 7/8	223 1/8		18 1/4	
12	204 3/8	222 1/4		17 7/8	
19	203 3/4	221 3/8		17 5/8	
26	206 5/8	225 1/2		18 5/8	
Oct. 3	206 3/4	224 1/4	233 1/8	17 1/2	8 7/8
10	207 7/8	225	234 1/2	17 1/8	9 1/2
17	206 1/2	224 5/8	234 5/8	18 1/8	10
24	204 5/8	223 7/8	234 1/4	19 1/8	10 3/8
31	207 1/2	226 1/4	236 3/4	18 3/4	10 1/2
Nov. 7	211 1/4	227 3/4	237 5/8	26 3/8	9 7/8
14	212 1/4	227 5/8	236 3/8	24 1/8	8 3/4
21	213 3/8		234 7/8	21 3/8	
28	214 1/4		234 7/8	20 5/8	
Dec. 5	215 1/8		234 5/8	19 1/2	
12	215 7/8		232 1/4	16 3/8	
19	215 5/8		230 1/2	14 7/8	
27	217 7/8		231 1/4	13 3/8	
Jan. 3	219 3/8		234	14 5/8	
9	221 1/4		236 5/8	15 1/2	
16	223 3/8		238 3/8	14 7/8	
23	222 3/8		236 1/8	13 3/4	
30	225 3/8		238 7/8	13 1/2	
Feb. 6	225 3/4		239 5/8	13 3/4	
13	225 1/2		239 5/8	14 1/8	
20	227 1/4		242	14 3/4	
27	233 3/8		247 1/4	13 7/8	
March 5	233 3/4		247 3/8	13 5/8	
12	231 3/8		244	12 5/8	
19	233		243 5/8	10 5/8	
26	237		247 1/8	10 1/8	
April 2	239		249	10	
9	243 7/8		254 3/8	10 5/8	
16	243 3/8		255 1/8	11 3/4	
23	245 7/8		256 3/4	10 7/8	
30	250 1/8		260 5/8	10 1/2	
May 7	247 3/8		256 5/8	9 3/8	
14	248 1/2		257	8 1/2	
21	245 3/8		254 5/8	9 1/2	
28	240 1/2		249 7/8	9 3/8	
June 4	241 5/8		250 3/8	8 3/4	
11	237 1/2		246 1/4	8 3/4	
18	233 7/8		242 1/4	8 3/8	
25	233 3/8		242 1/2	9 1/8	
July 2	231 7/8		241 5/8	9 3/4	
9	230 1/4		238 5/8	8 3/8	
16	230 1/8		239 1/2	9 1/4	

a/ Bid to farmers at local elevators in east-central Illinois.

Appendix Table 3.--Oats: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years

Date	East-central Illinois farm price	July	March	Basis	Difference
		1955 Crop			
1955					
Jan. 3	59	71 5/8		12 5/8	
10	59	71 1/2		12 1/2	
17	59	70 1/8		11 1/8	
24	60	71 1/2		11 1/2	
31	60	71		11	
Feb. 7	59 1/2	70 3/4		11 1/4	
14	58	70 3/4		12 3/4	
21	58	69 5/8		11 5/8	
28	57	68 1/8		11 1/8	
March 7	54	65 5/8		11 5/8	
14	56	67 1/8		11 1/8	
21	54	65 3/4		11 3/4	
28	55 1/2	66 3/8		10 7/8	
April 4	55	65 1/2		10 1/2	
11	55	64 7/8		9 7/8	
18	57	67 5/8		10 5/8	
25	57	67 3/4		10 3/4	
May 2	56	66 5/8		10 5/8	
9	57	67 7/8		10 7/8	
16	57	67 3/8		10 3/8	
23	59	69 7/8		10 7/8	
31	58 1/2	68 3/8		9 7/8	
June 6	56	65 5/8	69 3/8	9 5/8	3 3/4
13	56	67 1/8	70 5/8	11 1/8	3 1/2
20	55	65 5/8	69 1/2	10 5/8	3 7/8
27	56	65 1/4	69 1/4	9 1/4	4
July 5	53 1/2	64	68 1/2	15	4 1/2
11	53 1/2	63 3/8	68 3/8	14 7/8	5
18	50 1/2	60 1/4	66	15 1/2	5 3/4
25	49 1/2		63 3/4	14 1/4	
Aug. 1	50 1/2		64 7/8	14 3/8	
8	48		63 1/4	15 1/4	
15	48		64	16	
22	47		64	17	
29	46		63 5/8	17 5/8	
Sept. 6	48		64 1/4	16 1/4	
12	49		64 3/4	15 3/4	
19	51		66 3/4	15 3/4	
26	53		68	15	
Oct. 3	53 1/2		66 3/4	13 1/4	
10	56 1/2		67 1/8	10 5/8	
17	55 1/2		65 7/8	10 3/8	
24	55 1/2		65 1/2	10	
31	57		67 3/8	10 3/8	
Nov. 7	58		68 3/4	10 3/4	
14	57		67 3/8	10 3/8	
21	58 1/2		67 3/4	9 1/4	
28	58		65 5/8	7 5/8	
Dec. 5	59 1/2		64 1/2	5	
12	59 1/2		63 1/4	3 3/4	
19	59 1/2		64 3/8	4 7/8	
27	60		65 1/4	5 1/4	
1956					
Jan. 3	59 1/2		66	6 1/2	
9	60		66 3/4	6 3/4	
16	57		64 3/8	7 3/8	
23	57		64 3/8	7 3/8	
30	57		64 7/8	7 7/8	

Appendix Table 3.--Oats: Weekly Prices, Cash,[a] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Feb. 6	58		65	7	
13	57 1/2		63	5 1/2	
20	57		63 1/4	6 1/4	
27	56 1/2		62 1/4	5 3/4	
March 5	55		60 1/2	5 1/2	
12	56		61 7/8	5 7/8	
19	56 1/2		61 7/8	5 3/8	
		1956 Crop			
1956					
Jan. 3	50	63 3/4		13 3/4	
10	51	64 5/8		13 5/8	
17	50	63 1/8		13 1/8	
24	50	63 7/8		13 7/8	
31	51	64 1/2		13 1/2	
Feb. 7	51	63 3/4		12 3/4	
14	50	63		13	
21	52	64		12	
28	51	62 3/8		11 3/8	
March 7	51	63 3/4		12 3/4	
14	48	62 7/8		14 7/8	
21	51	64 1/4		13 1/4	
28	53	65 1/8		12 1/8	
April 4	54	66 3/8		12 3/8	
11	55	66 3/8		11 3/8	
18	54	66 5/8		12 5/8	
25	57	68 1/2		11 1/2	
May 2	55	66 7/8		11 7/8	
9	56	67 1/2		11 1/2	
16	56	67 1/8		11 1/8	
23	55	66			
31	54	65 3/4		11 3/4	
June 6	54	64 7/8	71	10 7/8	6 1/8
13	57	67 3/4	74	10 3/4	6 1/4
20	56 1/2	66 1/8	72 3/4	9 5/8	6 5/8
27	56 1/2	66 1/4	72 5/8	9 3/4	6 3/8
July 5	58 1/2	68 1/8	75 1/8	16 5/8	7
11	63	71 3/4	77 3/4	14 3/4	6
18	65	75 1/4	76 7/8	11 7/8	1 5/8
25	63 1/2		75 5/8	12 1/8	
Aug. 1	65 1/2		77 1/4	11 3/4	
8	64		77 1/8	13 1/8	
15	65		78 1/2	13 1/2	
22	61		77 5/8	16 5/8	
29	60		77 1/2	17 1/2	
Sept. 6	61 1/2		78 1/4	16 3/4	
12	62 1/2		78	15 1/2	
19	62 1/2		78 1/2	16	
26	63		78 1/4	15 1/4	
Oct. 3	63 1/2		78 1/4	14 3/4	
10	65 1/2		78	12 1/2	
17	70		80 1/8	10 1/8	
24	72		81 1/4	9 1/4	
31	72		82 1/8	10 1/8	
Nov. 7	72		80 3/4	8 3/4	
14	71 1/2		80 1/4	8 3/4	
21	74 1/2		79 3/4	5 1/4	
28	75		80 1/8	5 1/8	
Dec. 5	72		78	6	
12	73		77 3/8	4 3/8	
19	74		78 1/8	4 1/8	
26	73 1/2		78	4 1/2	

Appendix Table 3.--Oats: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
1957					
Jan. 2	73		77 3/4	4 3/4	
9	73		78 1/8	5 1/8	
16	73 1/2		79 5/8	6 1/8	
23	73		79 1/8	6 1/8	
30	72		78 3/4	6 3/4	
Feb. 6	67		75 1/4	8 1/4	
13	68		75 3/4	7 3/4	
20	68		76	8	
27	67		74 3/8	7 3/8	
March 5	69		75 1/4	6 1/4	
12	69		75 1/4	6 1/4	
19	64		72	8	
		1957 Crop			
1957					
Jan. 3	56	70		14	
10	56	70 1/8		14 1/8	
17	57 1/2	71 3/4		14 1/4	
24	57	71 1/4		14 1/4	
31	55 1/2	69 1/2		14	
Feb. 7	57	67 5/8		10 5/8	
14	57	67 1/4		10 1/4	
21	56	67 3/4		11 3/4	
28	56	66 7/8		10 7/8	
March 7	57	66 1/2		9 1/2	
14	55	65 1/2		10 1/2	
21	53	64 1/2		11 1/2	
28	55	65 3/4		10 3/4	
April 4	53	65 1/4		12 1/4	
11	57	67 5/8		10 5/8	
18	57	67 1/4		10 1/4	
25	57	66 7/8		9 7/8	
May 2	55	66		11	
9	56	67 1/2		11 1/2	
16	56	67		11	
23	56	66 7/8		10 7/8	
31	55 1/2	65 1/2		10	
June 6	53	62 3/4	69 1/4	9 3/4	6 1/2
13	53 1/2	64 1/4	70 1/8	10 3/4	5 7/8
20	54 1/2	64 5/8	70 5/8	10 1/8	6
27	58	67 1/8	72 1/4	9 1/8	5 1/8
July 5	58	67 1/4	73 1/8	15 1/8	5 7/8
11	58	67 1/2	73 1/4	15 1/4	5 3/4
18	58 1/2	68	71 5/8	13 1/8	3 5/8
25	58		71 5/8	13 5/8	
Aug. 1	57		70 5/8	13 5/8	
8	57		69 3/8	12 3/8	
15	58		70 1/8	12 1/8	
22	59		71 1/2	12 1/2	
29	60		70 3/4	10 3/4	
Sept. 5	60		71 1/2	11 1/2	
12	59		71 1/8	12 1/8	
19	58		70 5/8	12 5/8	
26	55		68	13	
Oct. 3	59		69 1/4	10 1/4	
10	59		69	10	
17	61		69 1/2	8 1/2	
24	61		68 1/4	7 1/4	
31	61		67 1/4	6 1/4	

Appendix Table 3.--Oats: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Nov. 7	62		68 1/4	6 1/4	
14	63		67 1/2	4 1/2	
21	64		67	3	
29	64		66 7/8	2 7/8	
Dec. 5	64		67	3	
12	64		65 7/8	1 7/8	
19	64		65 3/4	1 3/4	
26	63		63 5/8	0 5/8	
1958					
Jan. 2	62		63 5/8	1 5/8	
9	63		65	2	
16	63		65	2	
23	60 1/2		62 1/2	2	
30	57 1/2		62 5/8	5 1/8	
Feb. 6	58		64 1/4	6 1/4	
13	58 1/2		65	6 1/2	
20	59		65 1/4	6 1/4	
27	57 1/2		63 5/8	6 1/8	
March 6	59		65 5/8	6 5/8	
13	59 1/2		67	7 1/2	
20	59 1/2		67 1/8	7 5/8	
		1958 Crop			
1958					
Jan. 3	43	58 1/4		15 1/4	
10	43	57 3/4		14 3/4	
17	42	57 1/8		15 1/8	
24	43	57 1/8		14 1/8	
31	43	57 1/2		14 1/2	

Date	East-central Illinois farm price	July	March	Basis	Difference
Feb. 7	45	58 3/4		13 3/4	
14	46	59		13	
21	47	60 1/4		13 1/4	
28	47	61		14	
March 7	48	62 3/8		14 3/8	
14	48	62		14	
21	49	61 3/4		12 3/4	
28	49	62 1/2		13 1/2	
April 3	49	62 3/8		13 3/8	
11	50	62 3/4		12 3/4	
18	49	61 1/2		12 1/2	
25	47	60 1/8		13 1/8	
May 2	47	59 7/8		12 7/8	
9	46 1/2	60 1/4		13 3/4	
16	47	60		13	
23	49	60 1/4		11 1/4	
29	50	62 1/4		12 1/4	
June 6	50	62	68 1/4	12	6 1/4
13	50	61 5/8	68 1/8	11 5/8	6 1/2
20	52	63 3/8	68 7/8	11 3/8	5 1/2
27	53	63 3/4	69 3/4	10 3/4	6
July 3	53 1/2	64 1/8	70 3/4	17 1/4	6 5/8
11	53	65	70 1/8	17 1/8	5 1/8
18	54 1/2	65 1/2	71 7/8	17 3/8	6 3/8
25	53 1/2		68	14 1/2	
Aug. 1	55		68 5/8	13 5/8	
8	54		68 7/8	14 7/8	
15	53		66 5/8	13 5/8	
22	51		66 1/2	15 1/2	
29	52		68	16	
Sept. 5	51		67 3/4	16 3/4	
12	50		67 3/8	17 3/8	
19	50		67 1/8	17 1/8	
26	50		66 7/8	16 7/8	

Appendix Table 3.--Oats: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 3	50		66	16	
10	50		66	16	
17	50		66	16	
24	50		65 3/8	15 3/8	
31	50		65 7/8	15 7/8	
Nov. 7	51 1/2		67	15 1/2	
14	53		67 1/4	14 1/4	
21	54		67 3/8	13 3/8	
28	53		65 3/4	12 3/4	
Dec. 5	57		66 1/2	9 1/2	
12	58		66 1/2	8 1/2	
19	58		63 7/8	5 7/8	
24	59		65	6	
1959					
Jan. 2	57		65 1/2	8 1/2	
9	58		66 1/4	8 1/4	
16	57		66 7/8	9 7/8	
23	57		67 7/8	10 7/8	
30	58		66	8	
Feb. 6	58		66 5/8	8 5/8	
13	57		66	9	
20	54		64 3/4	10 3/4	
27	54 1/2		65 7/8	11 3/8	
March 6	54		64 3/8	10 3/8	
13	54		65 3/4	11 3/4	
19	55		64 3/4	9 3/4	
		1959 Crop			
1959					
Jan. 2	47	61 1/8		14 1/8	
9	47	61 1/4		14 1/4	
16	47	61		14	
23	50	62 1/8		12 1/8	
30	49 1/2	61 1/4		11 3/4	
Feb. 6	50	61 3/4		11 3/4	
13	50	61 7/8		11 7/8	
20	49	60 3/8		11 3/8	
27	50	62 5/8		12 5/8	
March 6	53	62 3/4		9 3/4	
13	52	62 7/8		10 7/8	
20	53	64 1/8		11 1/8	
26	54	65 1/8		11 1/8	
April 3	53	65		12	
10	56	67		11	
17	53 1/2	64 1/4		10 3/4	
24	53	63 5/8		10 5/8	
May 1	54	65		11	
8	54 1/2	64 3/8		9 7/8	
15	54	65 3/8		11 3/8	
22	54	63 1/2		9 1/2	
29	52	63		11	
June 5	52	63 3/4	67 5/8	11 3/4	3 7/8
12	54	66	70	12	4
19	55	66 3/8	71 3/8	11 3/8	5
26	56	66 5/8	72	10 5/8	5 3/8
July 2	56	67	71 1/2	15 1/2	4 1/2
10	58	66 5/8	70 3/8	12 3/8	3 3/4
17	62	67 3/4	70	8	2 1/4
24	63		70	7	
31	63 1/2		71 3/4	8 1/4	
Aug. 7	62		71 3/4	9 3/4	
14	61		71	10	
21	59		70	11	
28	60		70 7/8	10 7/8	
Sept. 4	63		71 1/2	8 1/2	
11	60		71 1/8	11 1/8	
18	57		70 3/4	13 3/4	
25	58		71 1/4	13 1/4	

Appendix Table 3.--Oats: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 2	59		71 3/4	12 3/4	
9	62		72 1/4	10 1/4	
16	62		73 1/8	11 1/8	
23	63		74	11	
30	69		75 3/4	6 3/4	
Nov. 6	69		76 1/4	7 1/4	
13	69		78	9	
20	69		75 5/8	6 5/8	
27	70		75 3/4	5 3/4	
Dec. 4	71		76 7/8	5 7/8	
11	71		76	5	
18	71		74 3/4	3 3/4	
24	72		75 1/2	3 1/2	
31	72		75 1/2	3 1/2	
1960					
Jan. 8	72		76 1/8	4 1/8	
15	72		77 1/4	5 1/4	
22	72		76	4	
29	68		75 3/8	7 3/8	
Feb. 5	68		75	7	
12	68		74 3/4	6 3/4	
19	68		73 1/2	5 1/2	
26	66		73 1/2	7 1/2	
March 4	69		75 1/4	6 1/4	
11	67		75 1/2	8 1/2	
18	70		75	5	
1960 Crop					
1960					
Jan. 4	55	66		11	
11	56	67		11	
18	56	67 1/4		11 1/4	
25	56	67 1/4		11 1/4	
Feb. 1	55 1/2	66 1/2		11	
8	56	66 3/4		10 3/4	
15	56	67		11	
23	55 1/2	66 5/8		11 1/8	
29	55 1/2	66 1/2		11	
March 7	57	68 3/8		11 3/8	
14	59 1/2	70 7/8		11 3/8	
21	60	71 1/4		11 1/4	
28	60	71 3/4		11 3/4	
April 4	61 1/2	72 3/4		11 1/4	
11	61	71 7/8		10 7/8	
18	61	72 1/8		11 1/8	
25	61 1/2	72 5/8		11 1/8	
May 2	62	73 3/8		11 3/8	
9	63	74		11	
16	58 1/2	73 5/8		15 1/8	
23	60	72 1/2		12 1/2	
31	60	72 3/4		12 3/4	
June 6	57 1/2	70 1/4	75 1/2	12 3/4	5 1/4
13	62	70 1/2	76	8 1/2	5 1/2
20	62	70 1/4	75 7/8	8 1/4	5 5/8
27	60	70 3/8	75 7/8	10 3/8	5 1/2
July 5	61	71 1/8	76 3/8	15 3/8	5 1/4
11	61	70 1/8	74 1/2	13 1/2	4 3/8
18	60	67 3/4	73 3/4	13 3/4	6
25	68		73 1/8	15 1/8	
Aug. 1	58 1/2		74 3/8	15 7/8	
8	56		73 7/8	17 7/8	
15	57		72 1/4	15 1/4	
22	57		73 1/2	16 1/2	
29	57		73 5/8	16 5/8	
Sept. 6	55		73 1/8	18 1/8	
12	53		72 5/8	19 5/8	
19	53		71 7/8	18 7/8	
26	53		69 1/4	16 1/4	

Appendix Table 3.--Oats: Weekly Prices, Cash,[a] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 3	53		70 7/8	17 7/8	
10	54		70 1/4	16 1/4	
17	54		68 3/4	14 3/4	
24	54		68 1/2	14 1/2	
31	52		67 1/8	15 1/8	
Nov. 7	53		67 1/4	14 1/4	
14	51		62 1/4	11 1/4	
21	51		62 5/8	11 5/8	
28	51		63 5/8	12 5/8	
Dec. 5	51		63	12	
12	55		64 1/2	9 1/2	
19	55		64 5/8	9 5/8	
27	56 1/2		64 1/8	7 5/8	
1961					
Jan. 3	57 1/2		65 1/2	8	
9	58		67 1/4	9 1/4	
16	60		65 1/2	5 1/2	
23	58		65 1/4	7 1/4	
30	59		67 1/2	8 1/2	
Feb. 6	59		67 5/8	8 5/8	
13	58 1/2		65 1/4	6 3/4	
20	56 1/2		63	6 1/2	
27	56 1/2		63	6 1/2	
March 6	55		63 1/4	8 1/4	
13	56 1/2		64 1/8	7 5/8	
20	54		60 1/2	6 1/2	
Mean 1955-60 Crops					
Jan. 3	51 5/8	65 1/8		13 1/2	
10	52	65 3/8		13 3/8	
17	51 7/8	65		13 1/8	
24	52 5/8	65 1/2		12 7/8	
31	52 3/8	65		12 5/8	
Feb. 7	53 1/8	64 7/8		11 3/4	
14	52 7/8	64 7/8		12	
21	52 7/8	64 3/4		11 7/8	
28	52 3/4	64 5/8		11 7/8	
March 7	53 3/8	64 7/8		11 1/2	
14	53 1/8	65 1/4		12 1/8	
21	53 3/8	65 1/4		11 7/8	
28	54 3/8	66 1/8		11 3/4	
April 4	54 1/4	66 1/4		12	
11	55 5/8	66 3/4		11 1/8	
18	55 1/4	66 1/2		11 1/4	
25	55 3/8	66 5/8		11 1/8	
May 2	54 7/8	66 1/4		11 1/2	
9	55 1/2	66 7/8		11 3/8	
16	54 7/8	66 7/8		12	
23	55 1/2	66 1/2		11	
31	55	66 1/4		11 1/4	
June 6	53 3/4	64 7/8	70 1/8	11 1/8	5 1/4
13	55 3/8	66 1/4	71 1/2	10 3/4	5 1/4
20	55 7/8	66 1/8	71 1/2	10 1/4	5 3/8
27	56 5/8	66 5/8	72	10	5 3/8
July 5	56 3/4	67	72 5/8	15 7/8	5 5/8
11	57 3/4	67 3/8	72 3/8	14 5/8	5
18	58 3/8	67 3/8	71 5/8	13 1/4	4 1/4
25	57 5/8		70 3/8	12 3/4	
Aug. 1	58 3/8		71 1/4	12 7/8	
8	56 7/8		70 3/4	13 7/8	
15	57		70 3/8	13 3/8	
22	55 5/8		70 1/2	14 7/8	
29	55 7/8		70 3/4	14 7/8	
Sept. 6	56 3/8		71	14 5/8	
12	55 5/8		70 7/8	15 1/4	
19	55 1/4		70 7/8	15 5/8	
26	55 3/8		70 1/4	14 7/8	

Appendix Table 3.--Oats: Weekly Prices, Cash,[a] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 3	56 3/8		70 1/2	14 1/8	
10	57 7/8		70 3/8	12 5/8	
17	58 3/4		70 5/8	11 3/4	
24	59 1/4		70 1/2	11 1/4	
31	60 1/8		70 7/8	10 3/4	
Nov. 7	60 7/8		71 3/8	10 1/2	
14	60 3/4		70 3/8	9 5/8	
21	61 7/8		70	8 1/8	
28	61 7/8		69 5/8	7 3/4	
Dec. 5	62 3/8		69 1/4	6 7/8	
12	63 3/8		68 7/8	5 1/2	
19	63 5/8		68 5/8	5	
27	64		68 5/8	4 5/8	
Jan. 3	63 1/2		69	5 1/2	
9	64		69 7/8	5 7/8	
16	63 3/4		69 3/4	6	
23	62 7/8		69 1/8	6 1/4	
30	61 7/8		69 1/8	7 1/4	
Feb. 6	61 3/8		69	7 5/8	
13	61 1/4		68 1/4	7	
20	60 3/8		67 5/8	7 1/4	
27	59 5/8		67 1/8	7 1/2	
March 5	60 1/8		67 3/8	7 1/4	
12	60 3/8		68 1/4	7 7/8	
19	59 7/8		66 7/8	7	

a/ Bid to farmers at local elevators in east-central Illinois.

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years

Date	East-central Illinois farm price	July	March	Basis	Difference
		1955 Crop			
1955					
Jan. 3	197	215		16	
10	190 1/2	213 3/8		22 7/8	
17	189	210 1/2		21 1/2	
24	194	213 1/4		19 1/4	
31	194	213		19	
Feb. 7	192	212 1/4		20 1/4	
14	192	211 1/2		19 1/2	
21	185	204 3/4		19 3/4	
28	183	201 7/8		18 7/8	
March 7	180	197		17	
14	184	201 7/8		17 7/8	
21	181	197 7/8		16 7/8	
28	181	198		17	
April 4	180	196 1/8		16 1/8	
11	177	194 3/8		17 3/8	
18	176	194 1/2		18 1/2	
25	178	195 7/8		17 7/8	
May 2	177	194 1/2		17 1/2	
9	184	201		17	
16	185 1/2	199 3/8	204 1/2	13 7/8	5 1/8
23	188	201	204 3/4	13	3 3/4
31	187	199 5/8	201 7/8	12 5/8	2 1/4
June 6	185	196 7/8	200 1/4	11 7/8	3 3/8
13	188	201	202 1/2	13	1 1/2
20	186	197	198 5/8	11	1 5/8
27	186 1/2	199 3/4	202 3/8	13 1/4	2 5/8
July 5	185 1/2	198 1/2	203 3/8	13	4 7/8
11	188	203 1/4	207 1/8	19 1/8	3 7/8
18	186	199 7/8	204 1/2	18 1/2	4 5/8
25	183		202 1/8	19 1/8	
Aug. 1	178 1/2		200 1/8	21 5/8	
8	176		197 1/4	21 1/4	
15	176		196	20	
22	176		196	20	
29	173		195 1/4	22 1/4	
Sept. 6	173		200 3/8	27 3/8	
12	177		202 3/8	25 3/8	
19	178		202 3/8	24 3/8	
26	182		206 5/8	24 5/8	
Oct. 3	183		205 5/8	22 5/8	
10	186		206 1/2	20 1/2	
17	183		204	21	
24	183		200 3/8	17 3/8	
31	183		206 1/4	23 1/4	
Nov. 7	183		207 1/8	24 1/8	
14	180		205 3/4	25 3/4	
21	182 1/2		205 3/4	23 1/4	
28	181		203 7/8	22 7/8	
Dec. 5	190		205 3/4	15 3/4	
12	191		209 1/2	18 1/2	
19	192		209 1/4	17 1/4	
27	190		209	19	
1956					
Jan. 3	198 1/2		212 1/8	13 5/8	
9	199		210 5/8	11 5/8	
16	196		210 1/2	14 1/2	
23	197		206 5/8	9 5/8	
30	198		207 1/2	9 1/2	

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Feb. 6	200		214 1/2	14 1/2	
13	203		216 3/8	13 3/8	
20	209		220 1/8	11 1/8	
27	209		219 7/8	10 7/8	
March 5	207		220 1/4	13 1/4	
12	209		223 3/8	14 3/8	
19	210		226 1/8	16 1/8	
		1956 Crop			
1956					
Jan. 3	175	198 7/8		23 7/8	
10	176	198 7/8		22 7/8	
17	170 1/2	196 1/2		26	
24	172	195 1/2		23 1/2	
31	173	197 5/8		24 5/8	
Feb. 7	172 1/2	197 1/8		24 5/8	
14	176	196 1/2		20 1/2	
21	180	199 5/8		19 5/8	
28	180	199 3/4		19 3/4	
March 7	179	198 5/8		19 5/8	
14	175	198 3/4		23 3/4	
21	179	200 1/2		21 1/2	
28	189	208 1/4		19 1/4	
April 4	189	211 7/8		22 7/8	
11	193	212 1/8		19 1/8	
18	189	209 1/8		20 1/8	
25	191	214 1/4		23 1/4	
May 2	193	209 1/4		16 1/4	
9	188	205 1/8		17 1/8	
16	189	208 7/8	213 3/4	19 7/8	4 7/8
23	189	205 5/8	209 7/8	17 5/8	4 1/4
31	185	203 1/4	209 1/8	18 1/4	5 7/8
June 6	189	206 1/8	212 3/4	17 1/8	5 7/8
13	190 1/2	208 3/8	215 3/4	17 7/8	7 3/8
20	189 1/2	208 3/8	215 3/4	18 7/8	7 3/8
27	186 1/2	206 1/8	214	19 5/8	7 7/8
July 5	185 1/2	206 1/2	214 1/2	29	8
11	185 1/2	205 1/8	214 1/8	28 5/8	9
18	193 1/2	214 1/2	221 7/8	28 3/8	7 3/8
25	193		221 1/2	28 1/2	
Aug. 1	192 1/2		223 3/8	30 7/8	
8	192		224	32	
15	197		228 1/8	31 1/8	
22	197		228 1/4	31 1/4	
29	198		229 1/2	31 1/2	
Sept. 6	203 1/2		231 1/4	27 3/4	
12	207		231 7/8	24 7/8	
19	207		233 5/8	26 5/8	
26	207		234 1/4	27 1/4	
Oct. 3	204		233 1/2	29 1/2	
10	204 1/2		233 1/4	28 3/4	
17	208		236	28	
24	209		237 7/8	28 7/8	
31	214		242 3/4	28 3/4	
Nov. 7	212		240 1/8	28 1/8	
14	218		242 1/2	24 1/2	
21	220		241	21	
28	228 1/2		242 3/4	14 1/4	
Dec. 5	223 1/2		238 1/4	14 3/4	
12	226 1/2		239 1/2	13	
19	225 1/2		239 3/4	14 1/4	
26	225		241	16	

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
1957					
Jan. 2	225		241 3/4	16 3/4	
9	223		240 7/8	17 1/2	
16	227		243 1/4	16 1/4	
23	225		241 1/2	16 1/2	
30	221		237 1/4	16 1/4	
Feb. 6	215		231 3/8	16 3/8	
13	213		231 1/2	18 1/2	
20	214 1/2		232 1/4	17 3/4	
27	214		231 7/8	17 7/8	
March 5	215 1/2		233 3/4	18 1/4	
12	215 1/2		231	15 1/2	
19	206 1/2		220 1/2	14	
		1957 Crop			
1957					
Jan. 3	207	229 5/8		22 5/8	
10	207	228 1/8		21 1/8	
17	210	231 1/2		21 1/2	
24	207	228 3/4		21 3/4	
31	203	224 1/4		21 1/4	
Feb. 7	201 1/2	222 7/8		21 3/8	
14	203 1/2	224 5/8		21 1/8	
21	202	224 3/8		22 3/8	
28	203 1/2	224 1/2		21	
March 7	202	223 3/4		21 3/4	
14	201	222 1/4		21 1/4	
21	196	217 1/4		21 1/4	
28	195	216 1/8		21 1/8	
April 4	193	213 3/4		20 3/4	
11	196	215 3/4		19 3/4	
18	193	214		21	
25	190	210 7/8		20 7/8	
May 2	187	207 7/8		20 7/8	
9	187 1/2	208 1/8		20 5/8	
16	189	209 1/4	216 7/8	20 1/4	7 5/8
23	185	205 3/4	215	20 3/4	9 1/4
31	182 1/2	203 1/4	212 1/2	20 3/4	9 1/4
June 6	181	202 3/8	210 7/8	21 3/8	8 1/2
13	181	202 1/2	211 1/4	21 1/2	8 3/4
20	184 1/2	205 3/8	214 3/4	20 7/8	9 3/8
27	196	214	222 1/4	18	8 1/4
July 5	192	209 1/2	219 1/4	27 1/4	9 3/4
11	193 1/2	212 3/4	221 1/4	27 3/4	8 1/2
18	196	215 5/8	221 3/4	25 3/4	6 1/8
25	190		219 1/8	29 1/8	
Aug. 1	195		221 1/2	26 1/2	
8	195		223 3/8	28 3/8	
15	197		226 5/8	29 5/8	
22	198		227 3/8	29 3/8	
29	192 1/2		225	32 1/2	
Sept. 5	198		227	29	
12	194 1/2		224 3/8	29 7/8	
19	192		221 1/8	29 1/8	
26	188		220 5/8	32 5/8	
Oct. 3	189		220 3/8	31 3/8	
10	193		223 5/8	30 5/8	
17	194		225 7/8	31 7/8	
24	190		221 1/4	31 1/4	
31	191		222 7/8	31 7/8	

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Nov. 7	199		224 1/8	25 1/8	
14	194		224 1/8	30 1/8	
21	194		223 1/4	29 1/4	
29	195		224 1/4	29 1/4	
Dec. 5	201 1/2		224 1/8	22 5/8	
12	203 1/2		222 3/4	19 1/4	
19	200		219 1/4	19 1/4	
26	204 1/2		220 7/8	16 3/8	
1958					
Jan. 2	203 1/2		219 5/8	16 1/8	
9	206 1/2		220 3/4	14 1/4	
16	205 1/2		218	12 1/2	
23	205 1/2		217 3/4	12 1/4	
30	205 1/2		217 3/4	12 1/4	
Feb. 6	203 1/2		216 3/8	12 7/8	
13	202		214 5/8	12 5/8	
20	205 1/2		218 3/4	13 1/4	
27	206		220 1/2	14 1/2	
March 6	206		222 3/4	16 3/4	
13	208		226 1/2	18 1/2	
20	204		222 3/4	18 3/4	
		1958 Crop			
1958					
Jan. 3	166	189 1/4		23 1/4	
10	165	188 1/2		23 1/2	
17	166	188		22	
24	162	186		24	
31	164	187 1/2		23 1/2	
Feb. 7	164	187 1/2		23 1/2	
14	167	191 1/2		24 1/2	
21	169	194 7/8		25 7/8	
28	169	193 1/4		24 1/4	
March 7	172	196		24	
14	169	192		23	
21	169	190 7/8		21 7/8	
28	168	190 3/4		22 3/4	
April 3	165	188 3/8		23 3/8	
11	166 1/2	190 5/8		24 1/8	
18	166 1/2	189 3/4		23 1/4	
25	163	186 1/8		23 1/8	
May 2	164	186 5/8		22 5/8	
9	162	184 3/4		22 3/4	
16	161	184	196	23	12
23	164	185 3/8	197 3/4	21 3/8	12 3/8
29	165	186 3/8	198 7/8	21 3/8	12 1/2
June 6	163	183 1/4	194 3/8	20 1/4	11 3/8
13	165 1/2	186 1/2	197	21	10 1/2
20	164	184 7/8	194 5/8	20 7/8	9 3/4
27	164	185 1/4	196 1/2	21 1/4	11 1/4
July 3	159	181 1/4	193 3/4	34 3/4	12 1/2
11	166	185 3/4	196 3/8	30 3/8	10 5/8
18	170 1/2	190 3/8	201 7/8	31 3/8	11 1/2
25	165		195 1/8	30 1/8	
Aug. 1	165		195 1/2	30 1/2	
8	164		195 1/4	31 1/4	
15	163		195 1/2	32 1/2	
22	163		193 1/2	30 1/2	
29	168		197 1/2	29 1/2	
Sept. 5	168		196 3/4	28 3/4	
12	169		197 3/8	28 3/8	
19	169		196 5/8	27 5/8	
26	174		199 3/4	25 3/4	

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 3	172		199 1/8	27 1/8	
10	172		200 7/8	28 7/8	
17	172		200 1/8	28 1/8	
24	171		197 1/2	26 1/2	
31	172		197 7/8	25 7/8	
Nov. 7	172		199 5/8	27 5/8	
14	176		199 3/4	23 3/4	
21	176		199 1/2	23 1/2	
28	175		198 1/2	23 1/2	
Dec. 5	176		198 1/2	22 1/2	
12	176		196 7/8	20 7/8	
19	179		196 5/8	17 5/8	
24	176		194 7/8	18 7/8	
1959					
Jan. 2	179		196 3/4	17 3/4	
9	180		197 1/2	17 1/2	
16	181		196	15	
23	183		197 5/8	14 5/8	
30	183 1/2		197 5/8	14 1/8	
Feb. 6	183 1/2		196 1/8	12 5/8	
13	184		198 1/2	14 1/2	
20	181 1/2		197 3/4	16 1/4	
27	187		203	16	
March 6	186		206 1/4	20 1/4	
13	187 1/2		208	21 1/2	
19	185		208 3/4	23 3/4	
		1959 Crop			
1959					
Jan. 2	152 1/2	181 3/4		29 1/4	
9	158 1/2	182		23 1/2	
16	160	182		22	
23	160	183 1/4		23 1/4	
30	160	183 1/2		23 1/2	
Feb. 6	161	183 7/8		22 7/8	
13	162	184 5/8		22 5/8	
20	162	185		23	
27	165	188 1/4		23 1/4	
March 6	164	187 1/8		23 1/8	
13	165	187 1/2		22 1/2	
20	164	186 1/2		22 1/2	
26	164	185 1/2		21 1/2	
April 3	166	187 7/8		21 7/8	
10	168	189 7/8		21 7/8	
17	167	187 7/8		20 7/8	
24	167	188 1/8		21 1/8	
May 1	167	187 3/4		20 3/4	
8	165	185 3/4		20 3/4	
15	166	187	197 3/4	21	10 3/4
22	164	183 5/8	195 1/4	19 5/8	11 5/8
29	163 1/2	183 7/8	195 1/4	20 3/8	11 3/8
June 5	162	183	195 1/2	21	12 1/2
12	163 1/2	184 3/8	197 1/8	20 7/8	12 3/4
19	168	186 1/8	199	18 1/8	12 7/8
26	174	186 1/2	199	12 1/2	12 1/2
July 2	179	187 1/4	199 7/8	20 7/8	12 5/8
10	181 1/2	186 3/4	198 1/2	17	11 3/4
17	182	186 1/8	197 1/8	15 1/8	11
24	183		197 1/2	14 1/2	
31	184		199 1/4	15 1/4	
Aug. 7	184		199	15	
14	185		199	14	
21	185		199	14	
28	187		200 1/2	13 1/2	
Sept. 4	189		201 7/8	12 7/8	
11	188		200 7/8	12 7/8	
18	188		200 1/4	12 1/4	
25	188		199	11	

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 2	190 1/2		200 3/4	10 1/4	
9	191		200 3/4	9 3/4	
16	193		202	9	
23	195		204 3/4	9 3/4	
30	194		204 1/4	10 1/4	
Nov. 6	196		203 3/4	7 3/4	
13	198		206 3/8	8 3/8	
20	196		203 1/8	7 1/8	
27	194		203 3/8	9 3/8	
Dec. 4	192		203 1/8	11 1/8	
11	191		201 3/8	10 3/8	
18	192		201 1/8	9 1/8	
24	194		203 1/4	9 1/4	
31	196		204 3/8	8 3/8	
1960					
Jan. 8	197		204 1/8	7 1/8	
15	196		202 5/8	6 5/8	
22	195		202 3/8	7 3/8	
29	195 1/2		200 3/4	5 1/4	
Feb. 5	194		198 3/4	4 3/4	
12	198		200 1/4	2 1/4	
19	194		199 7/8	5 7/8	
26	197		197 1/4	0 1/4	
March 4	198		198 3/4	0 3/4	
11	199		199 1/2	0 1/2	
18	201		203	2	
		1960 Crop			
1960					
Jan. 4	162	182 7/8		20 7/8	
11	165 1/2	183 3/4		18 1/4	
18	163	183 7/8		20 7/8	
25	164	185		21	
Feb. 1	162	184 1/2		22 1/2	
8	162	184 7/8		22 7/8	
15	164	185 3/8		21 3/8	
23	164	185		21	
29	164	184 1/8		20 1/8	
March 7	166	184 1/8		18 1/8	
14	166	184 1/2		18 1/2	
21	169	183 3/4		14 3/4	
28	169	183 7/8		14 7/8	
April 4	169	185 1/8		16 1/8	
11	170	184 3/8		14 3/8	
18	169	184 1/4		15 1/4	
25	170	184		14	
May 2	171	184 3/4		13 3/4	
9	172	185 1/2		13 1/2	
16	173	185 3/8	196 3/4	12 3/8	11 3/8
23	174	186	197 3/4	12	11 3/4
31	173	184 1/2	196 3/8	11 1/2	11 7/8
June 6	173 1/2	184 1/2	196 1/2	11	12
13	174	184 5/8	197 1/8	10 5/8	12 1/2
20	173 1/2	182 3/4	195 7/8	9 1/4	13 1/8
27	173	182 1/2	195 1/4	9 1/2	12 3/4
July 5	177 1/2	183 7/8	196 3/4	19 1/4	12 7/8
11	174	182	195 5/8	21 5/8	13 5/8
18	177	181 1/4	195	18	13 3/4
25	178 1/2		194 5/8	16 1/8	
Aug. 1	180		195 7/8	15 7/8	
8	182		197 1/8	15 1/8	
15	181		196 7/8	15 7/8	
22	181		197 7/8	16 7/8	
29	183		197 3/4	14 3/4	
Sept. 6	185		197 1/4	13 1/4	
12	189		197 5/8	8 5/8	
19	187		197 5/8	10 5/8	
26	188 1/2		198 3/4	10 1/4	

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a/] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 3	191		199 1/2	8 1/2	
10	191		199 1/2	8 1/2	
17	188		200 1/4	12 1/4	
24	187		201 3/4	14 3/4	
31	189		203 1/4	14 1/4	
Nov. 7	189		204 1/2	15 1/2	
14	187		203 3/4	16 3/4	
21	185		203 1/8	18 1/8	
28	186		204 3/8	18 3/8	
Dec. 5	187		205 1/4	18 1/4	
12	189		207	18	
19	187		205 1/8	18 1/8	
27	190		207 1/8	17 1/8	
1961					
Jan. 3	192		208 5/8	16 5/8	
9	194		211	17	
16	192		210 1/2	18 1/2	
23	193		211 3/4	18 3/4	
30	196		215 1/2	19 1/2	
Feb. 6	194 1/2		213 3/4	19 1/4	
13	189 1/2		209	19 1/2	
20	192 1/2		211 3/8	18 7/8	
27	190		209 7/8	19 7/8	
March 6	189		208 5/8	19 5/8	
13	188		208 1/2	20 1/2	
20	187		207	20	
Mean 1955-60 Crops					
Jan. 2	176 5/8	199 1/2		22 5/8	
9	177 1/8	199 1/8		22	
16	176 3/8	198 3/4		22 1/4	
23	176 1/2	198 5/8		22 1/8	
30	176	198 3/8		22 3/8	
Feb. 6	175 1/2	198 1/8		22 5/8	
13	177 3/8	199		21 5/8	
20	177	198 7/8		21 7/8	
27	177 3/8	198 5/8		21 1/4	
March 6	177 1/8	197 3/4		20 5/8	
13	178 1/8	199		20 7/8	
20	177 1/8	197 1/8		20	
26	177 5/8	197 1/8		19 3/8	
April 3	177	197 1/8		20 1/8	
10	178 3/8	197 7/8		19 1/2	
17	176 3/4	196 5/8		19 7/8	
24	176 1/2	196 1/2		20	
May 1	176 1/2	195 1/8		18 5/8	
8	176 3/8	195		18 5/8	
15	177 1/4	195 5/8	204 1/4	18 3/8	8 5/8
22	177 1/4	194 5/8	203 3/8	17 3/8	8 7/8
29	176	193 1/2	202 3/8	17 1/2	8 7/8
June 5	175 5/8	192 3/4	201 5/8	17 1/8	8 7/8
12	176 7/8	194 1/2	203 1/2	17 5/8	8 7/8
19	177 5/8	194 1/8	203 1/8	16 1/2	9
26	180	195 5/8	204 7/8	15 5/8	9 1/4
July 2	181 1/8	194 1/2	204 5/8	23 1/2	10 1/8
10	181 3/8	195 7/8	205 1/2	24 1/8	9 5/8
17	184 1/8	198	207	22 7/8	9
24	182 1/8		205	22 7/8	
31	182 1/2		205 7/8	23 3/8	
Aug. 7	182 1/8		206	23 7/8	
14	183 1/8		207	23 7/8	
21	183 1/4		207	23 5/8	
28	183 5/8		207 5/8	24	
Sept. 4	186 1/8		209 1/4	23 1/8	
11	187 3/8		209 1/8	21 5/8	
18	186 7/8		208 5/8	21 3/4	
25	187 7/8		209 7/8	21 7/8	

Appendix Table 4.--Wheat: Weekly Prices, Cash,[a] July and March Futures, Basis, and July-March Spreads, 1955-60 Crop Years (Continued)

Date	East-central Illinois farm price	July	March	Basis	Difference
Oct. 2	188 1/4		209 3/4	21 1/2	
9	189 5/8		210 3/4	21 1/8	
16	189 5/8		211 3/8	21 3/4	
23	189 1/8		210 5/8	21 3/8	
30	190 1/2		212 7/8	22 3/8	
Nov. 6	191 7/8		213 1/4	21 3/8	
13	192 1/8		213 3/4	21 1/2	
20	192 1/4		212 5/8	20 3/8	
27	193 1/4		212 7/8	19 5/8	
Dec. 4	195		212 1/2	17 1/2	
11	196 1/8		212 7/8	16 5/8	
18	195 7/8		211 7/8	16	
24	196 5/8		212 3/4	16 1/8	
31	199		213 7/8	14 7/8	
Jan. 8	200 1/8		214 1/2	14 3/8	
15	199 5/8		213 1/2	13 7/8	
22	199 3/4		212 7/8	13 1/8	
29	199 7/8		212 3/4	12 7/8	
Feb. 5	198 3/8		211 3/4	13 3/8	
12	198 1/4		211 3/4	13 1/2	
19	199 1/2		213 3/8	13 7/8	
26	200 1/2		213 3/4	13 1/4	
March 4	200 1/4		215	14 3/4	
11	201 1/8		216 1/4	15 1/8	
18	198 7/8		214 5/8	15 3/4	

a/ Bid to farmers at local elevators in east-central Illinois.

5/14/62